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ABSTRACT

Directed to three audiences--rehabilitation counselors, administrators in vocational rehabilitation, and decision makers in policy organizations--this document focuses on how to measure what happens to a disabled person who receives vocational rehabilitation services. Chapters 1 and 2 give background information on rehabilitation outcome measurement systems and a brief overview of the document purpose, respectively. Chapter 3 provides an overview of how outcome measurement is conceptualized, how outcome measurement systems are used by each of the three audiences above, and what impact outcome measurement has at these three levels. Chapter 4 describes in more detail what the current parameters of outcome measurement in rehabilitation are, including relevant federal standards. Chapter 5 is a catalogue of recently developed measures of rehabilitation outcomes that may have potential for improving the overall systems. Chapter 6 discusses research studies now underway to develop further improved outcome measurement systems, and gaps in the body of knowledge about outcome measurement that still need to be closed. Chapters 7 and 8 discuss the impact of outcome measurement on counselors, administrators, and policy makers. Chapter 9 presents some tentative prescriptions for taking action to improve outcome measurement systems. Chapter 10 makes a few predictions about the future of outcome measurement systems. An annotated bibliography is appended. (SH)

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EMERGING ISSUES IN REHABILITATION

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NEW DIRECTIONS IN REHABILITATION OUTCOME MEASUREMENT

BY

THOMAS E. BACKER, PH.D.

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CE 014 798

EMERGING ISSUES IN REHABILITATION

AN INTRODUCTION TO THE SERIES

The four comprehensive papers in the EMERGING ISSUES IN REHABILITATION series synthesize major research findings and report on innovations of current concern to vocational rehabilitation professionals:

Independent Living

by Susan Pflueger, with a Foreword by Edward V. Roberts

New Directions in Rehabilitation Outcome Measurement

by Thomas E. Backer, Ph.D.

Perspectives on National Health Insurance and Rehabilitation

by Herbert Dorken, Ph.D., with a Commentary by Joseph LaRocca

Sheltered Industrial Employment

by Carolyn L. Vash, Ph.D.

The Rehabilitation Services Administration Research and Evaluation program (DHEW) has long sought to promote the utilization of research results in order to improve the efficiency and effectiveness of vocational rehabilitation programs. In keeping with that effort, RSA made a grant to the Institute for Research Utilization to identify, select, and summarize the literature in selected areas of urgent concern to the vocational rehabilitation (VR) community. The Grant, Number 22-P-5901 9/3-01, was entitled "Literature Review on Topics of Urgent RSA Need and Concern."

To help ensure the selection of topics relevant to the VR field, the project staff convened a Consumer Panel of representatives of potential user groups: counselors, supervisors, State VR administrators, and planners and policymakers. The panel members nominated, discussed, then ranked in order of urgency, topics which they felt would be desirable for the literature reviews. They also recommended potential subject experts for each topic.

Many rehabilitation practitioners and administrators lack the time to keep up with research developments. They want to know *what* works in a given situation, and *how* to make it work. To facilitate this, each paper was prepared for a specific audience, and written in a clear, readable style. Annotated bibliographies accompany each report.

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ELIZABETH L. PAN, PH.D., PRINCIPAL INVESTIGATOR

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DECEMBER 1977

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WHAT'S IN THIS PAPER

This volume is about how to measure what happens to a disabled person who receives vocational rehabilitation services. It describes the main outcome measurement systems used now in the State-Federal rehabilitation system and in private facilities; research and development regarding improved methods of outcome measurement; the problems associated with getting these new methods installed in rehabilitation service delivery organizations; and ways to overcome some of these difficulties.

It is not a literature review in the usual sense, although there are a number of references to published books, monographs, and journal articles. The annotated bibliography at the end comes closest to fitting the traditional model of a state-of-the-art review. What has been attempted here is an *analytic survey* of new directions in outcome measurement, coupled with some prescriptions for how these innovative procedures might be used, and what barriers stand in the way of their effective utilization.

The paper is aimed at three main audiences:

- *Rehabilitation Counselors* — For counselors, a critical section is Chapter VII, which deals with the impact outcome measurement approaches have on counselors' daily work lives, including growth in and satisfaction with their jobs. Also there is a section (Chapter IX) giving some recommendations about what individual counselors can do *themselves* to promote improvement in the outcome measurement system they and their clients have to live with.
- *Administrators in Vocational Rehabilitation (VR) Agencies* — For this audience, perhaps the most relevant sections are the ones detailing new outcome measures currently available or being developed (Chapters IV, V); describing how outcome measurement practices may influence the administrative operation of a VR agency (Chapter VIII); and suggesting steps administrators can take to make use of available new knowledge about outcome measurement (Chapter IX).
- *Decisionmakers in Policy Organizations* — Those concerned with setting policy in the Rehabilitation Services Administration (RSA), Council of State Administrators of

Vocational Rehabilitation (CSAVR), Commission on Accreditation of Rehabilitation Facilities (CARF), National Accreditation Council (NAC) for the blind, and national professional associations in the rehabilitation field, such as the National Rehabilitation Association (NRA), American Rehabilitation Association (ARA), and National Rehabilitation Counseling Association (NRCA), will be the chief movers behind efforts in the immediate future to improve rehabilitation outcome measurement systems. For them, the section of this paper having to do with underlying problems and resistances to change in outcome measurement may be instructive (Chapter IV). In regard to setting funding priorities for future research in this important area, the section in this report dealing with current research and knowledge gaps could be quite useful (Chapter VI). Similarly, the recommendations made at the end regarding national-level efforts in outcome measurement could provide important input for decision-makers.

Not every part of the text that follows will be of equal interest to these three audiences. Therefore, we encourage skimming and selected reading based on perusal of the table of contents and this summary. A chapter-by-chapter outline of the text also is presented on pages 9 - 10, Chapter II.

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Any subject as complicated and controversy-laden as outcome measurement is best addressed with as much outside assistance as you can get. I've had the benefit of a number of guides through this particular minefield, and their names are given on the preceding page. A most special vote of thanks goes to Dr. Carolyn Vash, author of a paper in the series of which this one is also a part, who made the whole burden of this project much lighter because we made a pact to "go through it together." Her comments and intellectual support were unfailingly helpful. Also of much value were the many inputs of my two subject experts, Mr. Eric Lucero and Mr. Marvin Weisinger. From their very different perspectives, each made a considerable contribution to the content and overall orientation of the paper.

Every one of the other product consultants had substantial input to offer, and it is perhaps indicative of certain problems in the outcome measurement field that so little of what they suggested was in any significant way duplicative. Finally, a personal note of gratitude must be given to Dr. Elizabeth Pan, Principal Investigator of the RSA-sponsored project that sponsored this work, for all of her warm, supportive help amidst the many headaches of coordinating a research effort between Washington and California.

Thomas E. Backer
August 1977

TABLE OF CONTENTS

WHAT'S IN THIS PAPER -----	i
PRODUCT CONSULTANTS -----	iii
ACKNOWLEDGMENTS -----	iv
I. INTRODUCTION -----	1
WHY ISN'T THE NEW KNOWLEDGE BEING USED ALREADY -----	6
II. DEFINING THE TERRITORY -----	8
A. AUDIENCES -----	8
B. FOCUS OF THE REPORT -----	9
C. OVERVIEW OF REPORT STRUCTURE -----	9
III. OUTCOME MEASUREMENT: AN OVERVIEW -----	11
IV. CURRENT PRACTICE -----	17
V. NEW OUTCOME MEASURES: A CATALOGUE -----	25
NEW OUTCOME MEASURES-----	27
VI. RESEARCH AND RESEARCH GAPS -----	38
VII. IMPACT OF OUTCOME MEASUREMENT: COUNSELORS -----	46
VIII. IMPACT OF OUTCOME MEASUREMENT: ADMINISTRATORS AND POLICYMAKERS -----	49
IX. TAKING ACTION -----	50
A. INFORMATION RESOURCES -----	50
B. KNOWLEDGE UTILIZATION/ORGANIZATIONAL CHANGE RESOURCES -----	52
C. WHAT THE COUNSELOR CAN DO -----	52
D. WHAT ADMINISTRATORS CAN DO -----	53
E. WHAT POLICYMAKERS CAN DO -----	53
X. THE FUTURE -----	56
ANNOTATED BIBLIOGRAPHY -----	58

I. INTRODUCTION

Rehabilitation is not a light switch, either "on" or "off." Anyone who has worked in the field knows this, yet that's exactly how rehabilitations have been recorded since the 1920's. In State vocational rehabilitation (VR) agencies and most private facilities, the criterion of individual client, counselor, and program success has been the famed — or infamous — Status 26, "closed-rehabilitated," which simply means that at the end of the rehabilitation process the client was gainfully employed. How much effort it took to make the placement and how successful the rehabilitation — kind of job obtained, how long it will last, client's degree of satisfaction with the job and with the rest of his or her life, etc. — are simply not reflected in this system of measurement.

A counselor's view:*

The present system is cumbersome and does not reflect what counselors actually do for and with the client and within the community. Documentation is and will always be a reality that the counselor will have to contend with. Since it is part of the job, it is routine and not really oppressive. However, as a counselor, I question whether the documentation is relevant to the task performed. As other systems are introduced — SSI, SSDI, PA/VR, WES — they are added to existing systems and do not replace or diminish the administrative responsibilities. Therefore, in most areas a counselor has to be acquainted with several "systems" while trying to provide the same basic service to each client. We then are reduced to serving the system rather than the client. I feel strongly that a new system must be introduced that would organize and simplify data to be used universally by all components — SSI, SSDI, SD, PA/VR — rather than having separate systems for each. Secondly, we need to implement a system whereby the counselor would get recognition for services provided ALL clients rather than only the "26" closures. — Eric Lucero

*Throughout this paper, brief comments by Mr. Eric Lucero, a rehabilitation counselor with the Colorado Division of Rehabilitation, and Dr. Carolyn Vash, formerly Chief Deputy Director, California Department of Rehabilitation, will appear as a means of highlighting the relevance of material to the audiences these two represent. Unfortunately, it proved unfeasible to arrange for a policy-level decisionmaker to do the same.

There have been advantages to using this criterion of rehabilitation success. Status 26 closures place the focus on *vocational goals*, and until recently getting the handicapped back into gainful employment was considered the main, often the only, goal of all rehabilitation facilities.

The status of "closed-rehabilitated" is conceptually simple, and can be measured concretely. For this reason, it has been possible to document rather accurately the number of rehabilitations achieved by the State-Federal VR system, and this has been a key political strength in obtaining Federal funding. Congressmen and taxpayers alike are impressed with "the numbers" -- clear indications that large numbers of handicapped people have been returned to gainful employment and are contributing productively to the economy again as a consequence of rehabilitation services they received at taxpayers' expense. Moreover, the concept of "quantity" in terms of number of people who get a job is easy for political decisionmakers to grasp: "quality" moves into a domain that is much harder to explain.

Finally, in comparison with many other service delivery programs in the United States and abroad, a key strength of rehabilitation's outcome measurement approach is that a concrete criterion has in fact *existed*. In many other areas of the human services, it has not been possible to criticize specific outcome criteria because none existed, only vague statements of "goals." Even today, as other service delivery systems are beginning to come to grips with accountability issues, the existing rehabilitation outcome measurement system is arguably the best, by comparison with those existing in mental health, corrections, social welfare, etc.

Times have changed since the 1920's, when the current system of rehabilitation outcome statuses was devised. The way we now think about rehabilitation, and its goals as perceived by rehabilitation professionals, agency decisionmakers, by legislators and even the general public, is very different. The system for delivering rehabilitation services is itself quite different. Modern technology has overtaken rehabilitation just as it has every other human service delivery field, and the rising clamor for services, plus the increasingly expansive mandate of rehabilitation to get into areas of service delivery it hasn't had to cover before, has greatly increased the scope and complexity of the system. Rehabilitation personnel are themselves better trained and more able to cope with the delivery of a broad range of services to handicapped individuals. As a result, there has been a snowballing accumulation of problems and disadvantages in the traditional outcome measurement system, such as the following:*

*See Vialle (1968) for a fuller discussion of some of these factors.

- A tendency to emphasize numbers, not quality of rehabilitation (*i.e.*, the measurable changes in clients and their life situations). Under such conditions, the criterion can become an end in itself.
- A tendency to emphasize handling simple rehabilitation cases requiring little of the counselor's time in order to increase number of cases closed ("creaming"), a practice which is in direct conflict with the present congressional and RSA mandate to serve the more severely disabled.
- A tendency to encourage closing clients' cases before they are actually ready to enter the job market, in order to achieve another Status 26 closure.
- In certain other situations, a tendency to encourage *keeping* clients involved in the rehabilitation process, delaying closure in order to meet next year's quota.
- Difficulty in providing an even flow of work in a local rehabilitation agency, because Status 26 recordkeeping is so imprecise.
- Difficulty for specialized counselors who may handle much more complex kinds of client problems than does the average client counselor, and difficulty for generalists, especially in rural settings, who have to handle *everyone*.
- An inability to give credit to counselors for work on cases closed, not rehabilitated, but where there has been some meaningful improvement in the client's life or *future potential* for making a successful vocational adjustment.
- A tendency, therefore, for counselors to be less motivated to go after challenging cases or ones where it is understood from the start that complete rehabilitation cannot occur. Counselors can legitimately ask the question: "Why try when there's no credit provided for doing so?"
- A tendency to inhibit feedback to counselors, since the main recording system in rehabilitation is not oriented either towards an estimation of the quality of services provided or outcome in more than a simplistic sense. Therefore, counselors don't have nearly as good an

opportunity to learn from their failures and successes, and to continue to grow on the job.

- A tendency to deemphasize nonemployment-related factors, such as life satisfaction and ability to maintain the activities of daily living without difficulty, despite the fact that these variables are now known to be important to ultimate vocational rehabilitation.
- A tendency for counselors to be disinclined to share information with their colleagues about possible training facilities or job openings for clients since a colleague may use this information to make closures that his "helpful friend" might otherwise have made.
- Under pressure to provide an increasing number of case closures, counselors may suggest inappropriate jobs for clients, which may leave the client worse off than before. If the client fails before the end of the closure followup period, of course, the counselor will not get his Status 26, but the damage to the client has already been done!
- A tendency to impede program evaluation efforts or other means of stimulating program improvement, since it is not possible to get to the most accurate data about current levels of performance.

The litany of problems is familiar, and requires no further discussion. What this recitation really suggests is that *the system of outcome measurement currently employed in American rehabilitation service delivery settings is being used for purposes for which it was never intended, and therefore it is not working well.* Who could expect it to? The service delivery system, and the people within it, both clients and counselors, have changed, but the outcome measurement technology has not. Case difficulty and service quality constitute categories of fugitive data in rehabilitation at present, but it is not really fair to criticize the existing system for this shortcoming: it was never designed to provide that kind of information.

Many of the same difficulties noted above apply not just to individual counselors but to rehabilitation facilities which may be under contract to provide services to State VR agencies. Status 26 closures may be an even more inappropriate way of assessing the outcomes of service provided by facilities and monitored by State VR agencies.

A more responsive system for outcome measurement must take account of a number of conditions prevailing in vocational rehabilitation at the present time:

- (a) A focus on services to the severely disabled, as mandated by the Rehabilitation Act of 1973;
- (b) A heavy emphasis on accountability — evaluation of services also was mandated by the 1973 Rehabilitation Act — with the resultant need for routine gathering of relevant information about the nature and quality of services provided;
- (c) An increasing emphasis on the psychosocial aspects of rehabilitation and an intensified awareness of the importance to *all* individuals, including the disabled, of the quality of working life and life satisfaction in general;
- (d) Rising expectations for services, in conjunction with a proliferation of services available, partly as a reflection of the increased emphasis on psychosocial aspects of rehabilitation;
- (e) Better-trained, more skill-diversified rehabilitation personnel, especially with the growth of rehabilitation counselor training programs at the B.A., M.A., and Ph.D. levels, and rehabilitation psychology programs in universities throughout the country; and
- (f) The problem of disincentives, factors in the bureaucratic system which discourage disabled persons from participating in vocational rehabilitation, especially in those States where it may be much more attractive financially for a disabled person to simply stay on State disability.

There has been a good deal of research and local experimentation going on for the past few years aimed at improving the somewhat antiquated outcome measurement system we now have, and/or devising what may amount to an almost total replacement of the current system in favor of something that better serves the needs of all relevant populations. Many books, monographs, research reports, and journal articles have appeared on this subject, particularly in conjunction with the increasing overall emphasis on program evaluation in vocational rehabilitation services. In consequence, there is by now a considerable body of new knowledge available about how to improve outcome measurements in rehabilitation. In this report, we will synopsise some of the most important components of that body of knowledge.

WHY ISN'T THE NEW KNOWLEDGE BEING USED ALREADY?

If we know that it is inappropriate to think of rehabilitation success as an on-off switch, if we know at least something about what needs to be done to improve our conceptualizations of outcomes, and if we further have some technology available to do it, why haven't we done it? Making such improvements would seem imperative, since how we define outcome in part defines what *is* reality in the rehabilitation process. Yet, the evidence is that relatively little change has occurred up to this point, despite all of the interest in this subject.

An administrator's view:

It seems that every new system someone thinks of for measuring outcomes creates a new kind of problem for some subgroup of counselors — urban, rural, generalist, high welfare caseload, low welfare caseload, severely disabled caseload, nonseverely disabled caseload. Before these equity problems are halfway toward resolution, the new idea is scrapped — as having more problems than it's worth. — Carolyn Vash

We will try to give at least a partial answer to this question. However, we will not stop with explanations. The balance of this report will strive more toward practical recommendations based on new knowledge for making system improvements.

Making changes is more than simply a matter of providing information. The information is already available, even if some of it is not readily accessible — a difficulty we also will try to resolve in this report. Making changes in organizations also is typically a matter of overcoming certain barriers: psychological resistances to change, lack of resources to mount the change program, values that are in conflict with the new way of doing things, circumstances that prevail at the time the change program is contemplated, lack of perceived obligation to change, or lack of perceived payoff from the new way of doing things. Change requires both structural and procedural alterations in the system itself, as well as alterations in the thinking of people within the system.

So we will cover here what *are* the alternatives for making changes in our present system of outcome measurement, and how these can be made to work. We will contemplate how counselors, administrators, and policymakers can help to bring about change, using available resources

and building on guidelines to be offered here about how to plan for making changes in light of the above potential barriers. Through this orientation, this report may help its readers to think about and actively promote worthwhile change in rehabilitation outcome measurement systems.

II. DEFINING THE TERRITORY

In this section we will briefly set the stage for the discussion to follow. First, our major objectives for this paper are:

- To understand the barriers and resistances to change in vocational rehabilitation outcome measurement systems.
- To present and describe the alternatives for improvement in this system, including available technology for increasing the quality of outcome measurement, and also including research now underway to provide better alternatives in the future.
- To present resources for obtaining further information about this potentially usable technology.
- To present both policy and grassroots level recommendations about how to initiate change in outcome measurement at different levels in rehabilitation organizations.

Therefore, this paper can be seen in part as an effort to *promote knowledge utilization* in the outcome measurement field — by summarizing a body of knowledge, analyzing the barriers to its utilization, and presenting strategies for overcoming those barriers.

A. AUDIENCES

Our three main target audiences are vocational rehabilitation counselors, administrators in local and State rehabilitation agencies and in private facilities, and decisionmakers in policy bodies such as the Rehabilitation Services Administration (RSA), Council of State Administrators of Vocational Rehabilitation (CSAVR), Council on Accreditation of Rehabilitation Facilities (CARF), National Accreditation Council (NAC) for the blind, and national rehabilitation and professional associations, such as the American Rehabilitation Association (ARA), National Rehabilitation Association (NRA), and American Rehabilitation Counselors Association (ARCA).

In this treatment we will not emphasize the information needs and policy options of consumers of improved services — disabled

people themselves -- or researchers, whose principal aim is to generate new knowledge. These two audiences are surely important, and researchers may find parts of this volume of considerable help in their own work, but we have chosen to concentrate our resources on developing materials useful to the first three groups mentioned.

B. FOCUS OF THE REPORT

We will focus on outcome measurement at the individual level. That is, we will look only at those measurement techniques suitable for determining what happens to one individual in his/her movement through the rehabilitation system. Measures of groups and program effectiveness we will leave to discussions in the field of program evaluation.

C. OVERVIEW OF REPORT STRUCTURE

The next two chapters present the situation as it is now. Chapter III provides an overview of how outcome measurement is conceptualized, how outcome measurement systems are used by each of our three main audiences, and what impact outcome measurement has at these three levels. Chapter IV describes in more detail what are the current parameters of outcome measurement in rehabilitation, including relevant Federal standards. It also analyzes some of the reasons why making changes in the American rehabilitation outcome measurement system has been so difficult up to now.

Chapter V is a catalogue of recently developed measures of rehabilitation outcomes that may have potential for improving the overall systems. The bulk of the chapter focuses on a small number of systems for weighted closure that seem most promising in this regard.

Chapter VI discusses research studies now underway to develop further improved outcome measurement systems, and gaps in the body of knowledge about outcome measurement that still need to be closed. Chapters VII and VIII discuss the impact of outcome measurement on counselors, administrators, and policymakers.

Chapter IX presents some tentative prescriptions for taking action. Information resources for getting up-to-date knowledge on new and improved methods of outcome measurement are described, along with a brief section highlighting how to learn more about principles of knowledge utilization and organizational change. Then there is a set

of prescriptive guidelines for what counselors, administrators, and policymakers can do, each in his or her own bailiwick, to promote change.

Chapter X makes a few predictions about what the future may bring, including how changes in outcome measurement may fit into other developing trends in rehabilitation.

An annotated bibliography of important resources related to outcome measurement concludes this volume.

It should be emphasized that this report is not intended to constitute a comprehensive literature review in the outcome measurement area. Certain resources have been suggested in Chapter IX which, if taken together, would comprise such a review, and we do not intend to duplicate these works here. The emphasis instead is on analysis and on prescriptions for making practical improvements using the knowledge base others already have gathered together.

III. OUTCOME MEASUREMENT: AN OVERVIEW

Outcome measurement has to do with systematic means for discovering how disabled clients change as the result of their participation in vocational rehabilitation process. While the traditional parameter of change is whether or not the client gets a job, there is general agreement today among practitioners, as substantiated in the literature, that outcome measurement has to do more generally with measuring changes in clients' economic, physical, and psychosocial functioning, as well as in their vocational functioning and potential.

The First Institute on Rehabilitation Issues (Bassett, 1974, pp. 5-6) established definitions for four main areas of client change:

- *Vocational Functioning and Potential* — The degree to which a client's demonstrated capacity to appraise realistically his/her own vocational potential in light of inherent limitations, and to exhibit the physical and emotional endurance necessary to achieve vocational objectives.
- *Economic Independence* — The degree to which the client can function independently in society without reliance on public support for maintenance of income and other related social services.
- *Physical Functioning* — The degree to which a client demonstrates the capacity for reduction of symptoms, improved physical tolerance, development to fullest practical extent of compensatory mechanisms, increased endurance, and emotional adaptation to disabling conditions.
- *Psychosocial Functioning* — The degree to which a client demonstrates social and psychological adaptability which serve to enhance feelings of security, adequacy, functioning capability, emotional stability, and social interaction.

There is now an increasing interest in the study of multiple outcomes, covering some or all of the above main areas of client change. This reflects a fundamental alteration in the philosophy. Change of legal mandate for the rehabilitation services is an important change in the kinds of rehabilitation outcome measurement devices that are of interest. Clearly, if *all four* areas of change defined above are

regarded as relevant to appraising rehabilitation services, traditional Status 26 outcome measurement is no longer particularly effective — for it covers only one corner of the total field.

An administrator's view:

We have finally taken the blinders off. The goal of the State-Federal rehabilitation program is still vocational rehabilitation. "Comprehensive" rehabilitation has not yet been mandated. But we have finally acknowledged that vocational rehabilitation is often unattainable unless the other factors are attended to, too. For severely disabled people, it becomes unarguably clear. Without reliable attendant care or transportation arrangements, work is impossible. With them, it can be as probable as for anyone else.

— Carolyn Vash

Another dawning realization, although not one discussed much in the literature to this point, is that outcome measurement systems can and do serve different purposes for different individuals or groups within the rehabilitation service cycle. These differences necessitate either a *flexible* system which can encompass the needs of all those who need to use the information it provides, or else *parallel* or *tandem* systems that separately produce the data needed for good decisionmaking and action.

A counselor's view:

As a counselor one soon realizes that the "26" closure as a measurement of success lies with the agency and not necessarily the client. The consumer may have his own definitions of successful outcome in relation to services received. These definitions may or may not include successful adjustment in an appropriate vocation. The visually impaired, for instance, may feel successful if he has learned braille or how to use a cane.

Just as Status "26" outcome measures are no longer particularly effective, as they cover only one corner of the total field, vocational rehabilitation may represent only one corner in the total field of rehabilitation. With the advent of programs addressing the social needs of the disabled, such as independent living and consumerism, the expanded definitions will be followed

by expanded roles and services by the rehabilitation agency. One day, perhaps, vocational rehabilitation may be a division of a Department of Rehabilitation.
— Eric Lucero

The main purposes outcome measurement data serve for this report's audiences are as follows:

For the Counselor:

To give information for direct use with given clients (*i.e.*, corrective feedback, such as to modify a treatment plan in midcourse); for improvement of services rendered to clients *similar* to the individual on whom feedback was provided; for general professional development (*e.g.*, to increase skills in working with particular types of clients, if a skill deficit is identified by outcome measures organized by client-type); for performance appraisal either by self as an independent professional, or by one's immediate supervisor.

For Administrators and Policymakers:

These persons are more likely to be concerned with setting policy in regard to how outcomes are to be measured, rather than in using individual case outcome data themselves. Rehabilitation supervisors would, however, use individual case data in the context of training and performance evaluation. Also, they will be interested in outcome measurement strategies as applied *in the aggregate*, for use in program evaluation.

The current outcome measurement system began with a program evaluation reporting need. State VR agencies were required to indicate how Federal funds were being spent to rehabilitate clients. Back in the days when a more limited range of vocational rehabilitation services was provided, and where only a limited range of clients was served (*e.g.*, those with some clearly specified physical handicaps, but also with some clear potential for getting a job if provided with appropriate training or assistive devices), the Status 26-style outcome measurement system *may* have been reasonably appropriate. In today's rehabilitation system, it obviously is not.

Even for administrators and policymakers, a system which focuses *only* on employment status at the end of the rehabilitation process provides performance data too crude for use in making program

improvements or for justifying funding or continuation of a particular service-delivery effort. The information is equally of limited utility for dealing with the needs of individual counselors, who may not be able to make many useful improvements in their professional skills or to benefit from performance feedback if all they "know" from the measurement system is whether a client has held down any job for a given period of time.

A counselor's view:

The Status "26" closure is an appropriate outcome measurement for many clients who require short-range services, some physical restoration, and job placement. Individuals injured on the job who had experience in the world of work and had few problems prior to injury often see vocational rehabilitation as an employment service for the disabled. In providing services to the more severely disabled the counselor is usually engaged in a long-term program offering a variety of services in cooperation with other professionals. The counselor's skill level must be high and knowledge regarding psychological and medical aspects of disability is imperative. He must coordinate services with agencies that did not exist ten years ago. Research into the "weighted closure" may help solve this problem.

Many clients are closed prematurely to meet the demand of the system for closures. Many of the mentally retarded clients should never be closed as they will need services periodically throughout their work life. I feel that they should either be active or inactive, but not closed.

If there is a pressure for quantity, then quality will drop, although many administrators will argue the point.
— Eric Lucero

Sadly, though, this system is pretty much what we still have in all State vocational rehabilitation agencies and in most private facilities. Despite all the research and innovative practice undertaken in recent years, and an advancing state of knowledge about more sophisticated outcome measurement systems, what is known is much greater than what has been actively applied. There are new programs in some States (e.g., California, Florida, Oklahoma) in which revised outcome measurement systems have been experimented with, but even in these cases there is still a basic need to comply with the demands of the Federal-State reporting system. This is most unfortunate, for,

as mentioned earlier, the means by which outcome measures are taken have a great deal of impact on counselor, client, and the entire rehabilitation system *because they help to define the reality of rehabilitation services*. Some specific types of impact are as follows:

- Outcome of service is a fundamental part of any management information system, and thus the means used to gather such data have an impact on the entire VR organization;
- There is an impact on clients psychologically and behaviorally;
- Whatever outcome measures are taken inevitably will be used in performance review of employees, leading to consequences in terms of career advancement, motivation, etc.;
- With the increasing pressure for program evaluation and accountability, more and more rehabilitation agencies and facilities are installing formal program evaluation systems, which will be significantly affected by whatever outcome measurement methods are used;
- There is an impact on the training of new counselors, since at least some of the philosophy and practice of outcome measurement in practice settings will filter down to university undergraduate and graduate-level training programs.

The Institute on Rehabilitation Issues (Bassett, 1974) expands on this list of basic impacts in a compilation of "reasons for outcome measurement:"

Assess Counselor Performance

Improve Caseload Management

Program Development to a Special Target Group

Evaluate Substate Service Performance in Areas

Provide Budget Justification

Reduce Dissatisfaction

Minimize Conflict in Client Assessment of Services

Collect Data Showing State Agency Performance

Make Aggregate Profiles of Special Target Groups
Nationally

Show Performance in Utility of Demonstration Projects,
Pilot Projects, and Research Utilization

Measure Performance Over Time/Trend Series

Measure Impact of Alternative Case Delivery and
Administrative Approaches (e.g., Services Integration)

Measure Recovery or Reduction of Cost of Social
Security and Trust Funds and SSI Programs (Disabled
and Taxpayer)

Response to Rehabilitation Constituency

Provide Basis for Audit and Program Administration
Reviews Used in Evaluating Legislative Proposals and
Amendments

Make Cross-Program and Cross-Agency Projections and
Comparisons

Devise Long-Range Projections of Economic and Social
Indicators

Devise Cost-Benefit Ratios Used in Lobbying Efforts
at All Levels, Used in Specific Client Appeals on
Service Outcome

It is in this context of very broad potential impact through-
out a VR organization that the alternative systems for outcome measure-
ment presented in this paper must be evaluated.

IV. CURRENT PRACTICE

The Status 26 closure as a basic measure of vocational rehabilitation outcome is a well-entrenched part of the VR establishment. It exists within a welter of local, Federal, and State reporting requirements that include other statuses as well for coding purposes: carrying clients through the rehabilitation process, into referral to another agency, to closed-not-rehabilitated, etc.

Considering the number of years this system has been in operation, it has generated remarkably few political and funding difficulties. As remarked in Bassett (1974), "Many vocational rehabilitation agencies have never been challenged in legislative or budget processes to elaborate upon the 26 closure." The present system is one legislators are used to. Case closures can be easily translated into dollar values. More abstract measures of "quality of life" cannot, at least at the present time.

Although shortcomings in the present system of outcome measurement have been recognized for a long time, these deficiencies have stayed largely under the surface, and it is partly for this reason that efforts to promote change in the system have met with such little success.

In the presently existing system, individual counselors keep records of their clients' progress through the rehabilitation process. This information is then aggregated in the form of caseload reports; unit reports, prepared by a local rehabilitation agency office, for example; district office reports; and ultimately State agency reports. States then interact with RSA regional and Federal offices in order to provide required information about case outcomes.

RSA has issued Federal standards in the form of a June 1971 *Vocational Rehabilitation Manual* which dictates procedures by which case statuses are generated. Form RSA-300 accumulates basic information about each case closure, and is used in measuring the effectiveness of the rehabilitation program as a whole and by target group populations; in describing client characteristics and program-related experiences to the Congress, State legislatures, and various public and private agencies and organizations interested in the vocational rehabilitation of the handicapped; and in providing specific answers to questions frequently raised for budgetary, legislative, administrative, and informational purposes. The form provides a way of recording what happens to each client from first contact to final closure. The R-300 form thus is a basic component of the overall vocational rehabilitation management information system which guides

funding and other types of interaction between RSA at the Federal level and State VR agencies.

At present, the 26 closure encompasses the following "substatuses": closed in competitive employment, full time, economically independent; closed in competitive employment, less than full time; sheltered employment; homebound employment; unpaid family worker; and homemaker. This range of subclasses within Status 26 creates some problems, of course, since there is a substantial difference between full-time and part-time work, between worker and homemaker, etc.

Reporting requirements have changed somewhat since passage of the 1973 Vocational Rehabilitation Act. Evaluation of the effectiveness of vocational rehabilitation services is now mandated. Needs of the severely handicapped are emphasized, and measurement systems thus called for that will be sensitive to outcomes in these cases. Individualized rehabilitation plans must be written for each client to specify outcome goals and how these will be achieved. Also, the VR agency's role in providing services to eligible handicapped individuals dependent on public support was continued, and is to be evaluated in terms of reduction of dependency.

To further detail what VR agencies are now required to do in the way of program evaluation, Congress directed the Secretary of HEW to publish a set of standards providing for a multicriteria approach to evaluating VR services. These were initially published in the *Federal Register* in 1974. These nine standards, which have been frequently revised since their initial issuance by RSA and by the Evaluation Subcommittee of CSAVR, among others, are:

1. To insure that the rehabilitation program is serving the eligible disabled population and to insure that these services are provided in an equitable manner;
2. To insure that rehabilitated clients are placed in gainful employment suitable to their capabilities;
3. To insure that undue delays are avoided in providing clients with VR services;
4. To insure that available resources are utilized to achieve maximum operational efficiency;
5. To insure that manageable-sized caseloads are maintained;
6. To insure that clients closed-rehabilitated retain the benefits obtained from the rehabilitation process;

7. To insure that the need for postemployment (post-closure, Section 103(a)(2) of Pub. L. 98-112) services is satisfied;
8. To insure that agencies are consistently identifying reasons why clients are not successfully rehabilitated;
9. To insure that the client is satisfied with the vocational rehabilitation services as developed with the counselor.

Federal reporting now is supposed to be done in the context of these standards, although there have been difficulties because the standards have changed so frequently. There is some evidence that States continue to report in the old R-300 terms, rather than converting to the new system. State VR agencies also are required to submit a report, the "A-1 report," each year detailing their future plans for service delivery to various types of clients, and this reporting requirement still needs to be more fully coordinated with the nine standards.

Making such broad-gauged standards workable in the real world of rehab services is no easy job. In addition to its own efforts and CSAVR's, RSA also has awarded contracts — first to the Urban Institute and now to Berkeley Planning Associates (Berkeley, California) — to undertake further requirements in the standards. Berkeley Planning Associates recently has issued a working paper (1977) which reviews literature relevant to the nine standards, and gives a good idea of possible future directions in their evolution.

An administrator's view:

A poignant article I read some months ago likened what happens when the State-Federal VR program counts numbers of 26 closures with what happened in My Lai when "body count" became the measure of whether we were winning the war. The message was, "Get bodies, you have to get bodies!" In My Lai, that meant civilians, including children. In VR, it may mean the dubiously or very mildly disabled. — Carolyn Vash

For private facilities, a similar set of evaluation standards has been devised by the Commission on Accreditation of Rehabilitation Facilities (CARF), as presented in their *Standards Manual for Rehabilitation Facilities*.^{*} The principal components of these standards are as follows:

^{*}CARF has just published a new manual, *Program Evaluation in Vocational Rehabilitation Facilities*, which supersedes the publication described here. Unfortunately, the new manual was not available for review when this paper was prepared.

1. The evaluation system shall provide for a statement of purposes, program goals and objectives.
2. There shall be a relationship between the statement of purposes, program goals and objectives, who is served, and services provided.
3. Statements of goals and objectives must be achievable, measurable, and the attainment of all objectives should enable the program goals to be achieved.
4. The facility's evaluation system shall provide for measures of effectiveness.
5. The facility's evaluation system shall provide for measure of the efficiency of the facility.
6. There shall be a system to describe and monitor who is being served by the facility.
7. The evaluation system result shall be communicated to appropriate parties to be utilized in facility decisionmaking.
8. Appropriate information on results shall be made available in an understandable fashion to the governing body and staff of the facility and to the public, including purchasers, contributors, and consumers.
9. The facility shall have a mechanism to provide for continuous review of the adequacy of its evaluation system.

The common threads in these two sets of standards are their advocacy of developing *means for specifying criteria* and *means for gaining knowledge through the evaluation process that can be used not only in judging program worth but also in making program improvements.*

One would need to look no further than these two sets of standards for program evaluation in rehabilitation organizations in order to understand that current case closure methods are wholly inadequate for meeting informational needs. This realization helped spur the formation of groups such as the First Institute on Rehabilitation Issues, which focused on measurement of outcomes, and the funding of a number of research projects designed to facilitate the development of better outcome measurement systems. The latter will be described later on in this report. Sadly, there have been few fundamental

improvements as yet, despite many other changes in the rehabilitation system, such as the increasing movement of State agencies and private facilities into program evaluation activities. For example, Robert Walker and his associates in Minneapolis have devised a program, now being offered to private rehabilitation facilities throughout the country, which is designed to help agencies comply with the CARF standards by redesigning their evaluation system and the agency components that fit around it in a meaningful way.

Why is there such resistance to change? One reason was advanced at the beginning of this chapter. The Status 26 outcome measurement system has been in certain ways quite successful over the years of its existence, and it is understandable that State agencies or private facilities using a similar outcome measurement system would be threatened by the idea of replacing the old, tried and true method with one that is new and might possibly leave them worse off than before. This is not an unrealistic fear. Often in installing new evaluation or outcome measurement systems there *are* problems and there may be a period of time when the "patient gets worse before he gets better."

The motivation for rehabilitation agencies — and, indeed, for RSA at the Federal level — to maintain the status quo is particularly powerful because of the extraordinary political success that has been enjoyed by rehabilitation over the years. As Moriarty (1977) observes, rehabilitation services have been supported broadly across the spectrum of political ideology from ultra-liberal to arch-conservative. Richard Nixon, the first President ever to veto VR legislation, was careful to point out when he did so that technical matters, not substantive ones, prompted his veto. When Congress overrode the Nixon veto, it did so by one of the largest majorities in history. With this kind of spectacular track record, based in part on the easy measurability of the old-fashioned Status 26 case closure — "we've had x-thousands of rehabilitations this year!" — small wonder that there is a vested interest in protecting the current system.

However, relative advantage alone is not the sole motivation. For one thing, it is becoming increasingly evident that whatever the positive payoffs from this system, there also are a number of significant negatives. Therefore, we must seek additional mechanisms of explanation for the current state of affairs in outcome measurement.

A counselor's view:

I feel that, as a group, counselors are flexible in their outlook toward administrative change in recording. They have to be since State and Federal requirements change frequently, new computer or program systems

are added or revised. Many, if not most, of the changes take place with little or no input from field staff. If the counselors could see the positive aspects of the change and that revision in reporting would mean that the measurement of their performance would be enhanced, I think the response would be more positive. The reality of a new system or the question asked would be, "Would the new system require substantially more time and paperwork?" Counselors already feel overburdened. There may be more resistance to additional paperwork than to a new reporting system. Insofar as it is possible additional reporting should be a clerical function. — Eric Lucero

One obvious factor is simply *habit*. In the literature on organizational change, it is noted throughout that people tend to have some natural resistance to changes in accustomed methods of operation. This reflects more than just the desire to keep on doing something that presumably has been at least reasonably successful, but also a human need for security and predictability in everyday affairs, and to avoid the stress of making too many changes.

The habit vectors would be particularly strong for rehabilitation in 1977, since there have been so many other changes in the system recently. Rehabilitation services at the Federal level have been organized, reorganized, and then reorganized again. State VR agencies have been compelled to undertake new activities — with the inevitable unsettling effects on staff at all levels. An increasing amount of time is taken up with routine recordkeeping and evaluative data gathering, and this in itself induces resistance to new outcome measurement systems which might further burden already overworked staff with paperwork.

This effect has often been noted in the literature on program evaluation as well. People tend to be wary of evaluation systems because they fear that — almost inevitably — their installation will result in an increase in workload without any measureable advantage accruing to individual staff. Again, this fear has a basis in reality, for very often outcome measurement or evaluation systems are designed without proper concern for whether they will benefit those who will be directly affected by their implementation.

Moreover, when we noted earlier that the outcome measurement system in VR is perhaps the best and most fully developed in all the social services, another source of resistance to change was also identified. The more entrenched a system is, the more difficult it is to change.

There is also undoubtedly a certain amount of *suspiciousness* about new techniques, particularly those based on research. The gap between researchers and practitioners in the human services is a well-known one, and has often been documented in the rehabilitation field. Anything that grows out of a research study is viewed with some tentativeness as far as its potential applicability in the real world is concerned. Again, such reservations are often justified. A system which may work very well in a controlled research study may be impractical or even counterproductive to use out on the firing line of service delivery agencies.

A final and very important aspect of resistance to change in the outcome measurement system is a *fear* of accountability. One of the psychological "advantages" of the current Status 26 system is that it permits a lot of deliberate ambiguity. There are aspects of the performance of individual counselors, groups of counselors, units, programs, and entire State agencies which can never be tracked down precisely because they are obscured in the way outcomes are measured.

If a more precise system of outcome measurement is introduced, the result would be a clear pinpointing of who is serving what kinds of clients, at what cost, and with what ultimate outcomes in terms of rehabilitation, not only to gainful employment but also to jobs with career potential, good salaries, and with related impacts on physical and psychosocial functioning. Moreover, since program evaluation has been used in the past to "get rid" of programs or cut back on their funding irrespective of actual worth, even the best and most self-confident of counselors may have legitimate reason to fear a new accountability system. However good it is, what happens if it is misused?

The sheer cost of making a nationwide change in the system for reporting outcomes of rehabilitation also should not be disregarded. Even minor alterations in reporting requirements can be very expensive to implement. The kind of overall revision contemplated in this report would surely entail expenditures of millions of dollars at the Federal, State, and local levels. In an era where fewer dollars are available for human services, this can hardly be an appealing prospect — particularly if it occurs in the context of some suspicion about whether or not the results will really be worth it.

Human service professionals tend to have — partly growing out of their common acculturation in the medical model of service — a strong internal conviction that the services they are providing are worthwhile, because they are dedicated to helping people, and professionally trained to do that job. The realization that all human systems and the individuals within them can be improved, which is so fundamental

to good program evaluation, is not very easily assimilated into this belief system, and the result is that many professionals may be resistant to evaluation or outcome measurement because they simply think it is unnecessary. They *know* they are doing a good job, and don't need any fancy system of numbers and data forms to prove it.

All of the above-mentioned factors surely are going to make difficult any important changes in outcome measurement in vocational rehabilitation. There are a series of psychological resistances, bad experiences from the past, and funding and technological problems which are not easily resolved. Yet, as we have seen, the present system is inadequate. Therefore, new alternatives must be considered, although with a careful eye to their feasibility and to the cost required to install them both in financial and human terms. If a system is selected purely for its technical superiority and implemented without regard to all of the factors of resistance noted in this chapter, such a system would almost surely be doomed to failure, or at least to much less than fully effective operation. Methods for taking account of these resistance factors will be described in Chapter IX.

V. NEW OUTCOME MEASURES: A CATALOGUE

There have been quite a number of attempts to develop new outcome measures for rehabilitation services over the past few years. This volume will not attempt a comprehensive review of them. For that purpose, the reader is referred to Chapter 4 of Bennett and Weisinger's *Program Evaluation, A Resource Handbook for Vocational Rehabilitation* (1974). In this volume, the authors have culled a total of 146 outcome measures from some 75 studies in the VR field. However, many of these measures are relevant only to programs, not individual clients, and thus will not be discussed here. Much of the discussion that follows (including many of the evaluative comments on particular outcome measures) has been taken from Bennett and Weisinger's compendium, supplemented by a variety of other sources (including another review by Weisinger [1975]).

It is very important to note at the outset of this chapter one of the main disadvantages of a literature review in describing the current state of the art in a given subject field: *the literature you review is already out of date by the time you read it!*

Clearly, the best way to get a truly up-to-date portrait of the state of the art on a particular subject is to solicit unpublished works, have telephone and mail interactions with researchers and users of recent innovations, and — ultimately — hold a conference which brings together leading practitioners and researchers for a dialogue on the subject. Such strategies were feasible only to a very limited degree here, and consequently some of the outcome measures we are describing may have been modified, field tested, and either adopted or abandoned since the written materials describing them were prepared. We have made an effort wherever possible to obtain a more recent update, but the reader is cautioned to use the listings below primarily as means for gaining *access* to current information that may be of help.

To set the stage for this discussion, following is a list of the client variables typically assessed through outcome measures administered during or following rehabilitation services:

Client's Income (annual, monthly, or by household)

Hours Worked Per Week

Job Retention

Job Benefits

Advancement Potential of Job

Type of Job (In Relation to the Client's Training,
Past Experience, and Aspirations)

Client's Welfare Status

Amount of Average Welfare Grant

Change in Client's Skills as the Result of Rehabilitation

Employer Satisfaction with the Client's Work Performance

Employee Satisfaction with Job Received

Client's Satisfaction with the Rehabilitation Process
Itself

Psychological Characteristics Related to Successful
Vocational and Life Adjustment

Improvement in Physical Functioning

Improvement in Psychosocial Functioning in Relation
to Self, Family, and Community

Ability to Maintain Self Independently

Ability to Perform the Activities of Daily Living

Upward Mobility Rating

Attendance and Punctuality at Work

Work Quality

Most of the measures that follow are concerned with changes in one or some combination of these variables. The operational word is *change*—rehabilitation benefits have to do with changes in clients' lives as a result of the VR process.

It should be noted that these outcome indicators vary widely in the degree of subjective measurement they require (*e.g.*, from amount of income earned—highly objective—to employer's satisfaction with client work performance—highly subjective). In the literature on how people change as a result of psychotherapy, it has been found rather consistently that subjective measures do *not* relate highly to more

objective behavioral measures of outcome. What clients or counselors/therapists *say* and how clients *behave* may not be as highly related as common sense might suggest. This finding should be taken into account when appraising the potential of any given rehabilitation outcome measure. It may be that the same difficulty exists, at least to some degree, for assessments of VR outcome. One obvious solution to this problem, of course, is *multiple measurement* — reliance on not one but a number of variables for assessing client change.

NEW OUTCOME MEASURES

- *Job Satisfaction and Family Functioning* — Not widely used in rehabilitation, this measure has been misused in evaluating program effectiveness. Lack of job satisfaction can lead to job termination, but may or may not be related to the quality of VR services provided. The family function variable on this test is difficult to measure. (Schneiderman, 1972.)
- *Rehabilitation Service Satisfaction Questionnaire* — A device for assessing clients' views of service effectiveness, which was still in the experimental stages in 1973. (Muthard and Miller, 1968; Rubin, 1973.)
- *Scale of Rehabilitation Gain* — This scale attempts to assess effectiveness of VR services by assimilating diverse factors in the areas of physical and emotional health, work adjustment, and life activities. (Reagles, Wright, and Butler, 1970.)
- *Attitude of Client to Agency* — This index of client attitude is difficult to interpret, since a negative attitude may reflect slow or poor service, but may also reflect such characteristics as client militancy. (Miller & Barillas, 1967.)
- *Rehab Services Satisfaction Survey* — This scale measures one aspect of program quality — the client's opinion of how "good" he thought the VR program was. Since the counselor has the most direct contact with the client, the results tend to measure how well the client liked his/her counselor. (Tenth Institute on Rehabilitation Services, 1972.)
- *Measure of Employment Satisfaction* — An accepted, established scale measuring client satisfaction with employment. (Weiss, 1967.)

- *Measure of Employment Satisfactoriness* — An accepted established scale measuring the employer's satisfaction with the client. (Gibson, et al., 1970.)
- *Job-Relatedness to Vocational Training* — A scale measuring relevancy of training to employment. (Wheeler, 1971.)
- *Structured Case Review* — This measure establishes certain standards as criteria for "good" counselor performance, and then permits examination of one counselor's case records, or a program's case records, to determine how well these standards have been met. (Muthard and Miller, 1966.)
- *Pre- and Post-Treatment Structured Interview* — The potency and value of this experimental approach to measuring VR outcomes is entirely dependent on how well the interview is planned and conducted. (Rubin, 1973.)
- *Oklahoma RRRI Consumer Measurement Scale* — This scale attempts to measure client satisfaction on nine dimensions: speed of service, medical services, training services, employment satisfaction, participation and planning, counselor effort in placement, agency policies, physical facilities, and personal treatment. It does not provide for premeasuring to allow evaluation of client change. Most items are highly subjective. (Cited in Bassett, 1974.)
- *West Virginia Followup Kit* — This how-to-do-it kit contains instructions for sampling, data collection, table construction, data analysis, and reporting on a variety of rehabilitation variables. A questionnaire for use with employers also is included. The approach provides information regarding status of client after closure on such variables as employment status, satisfaction with VR services and job, interpersonal relations on job, personal work characteristics, characteristics of family, and contribution made by VR agency to present vocational status. (Cited in Bassett, 1974.)
- *Rhode Island Attitude Survey* — This instrument is used to assess client attitude change from initial interview to closure. It contains 96 subjective items reflecting client attitudes towards disability and rehabilitation services. (Cited in Bassett, 1974.)

- *New Jersey Client Satisfaction Scale* - Used for followups, this questionnaire is composed of 13 items to measure client satisfaction with vocational rehabilitation, public assistance status, job history, and present occupational status. There is no premeasure to allow for assessment of client change. (Cited in Bassett, 1974.)
- *Counselor Productivity Index* - The work of Serot (1972) to develop a counselor benefit index and a counselor cost index can be adapted to produce an index of overall counselor productivity. Rubin and Reagles (1976) suggest that such a device may be useful for counselor performance appraisal.

By far the most promising area for exploration in new methods of outcome measurement is that of the *weighted closure*.* This approach is designed to reflect the reality that some clients are harder to assess, harder to train, and harder to place than others.

Many of these measures also acknowledge that rehabilitation gain may be made on more than the dimension of placement, and so in addition to weighting certain factors using a computational process that allows for differences in case difficulty, there also is provision for "points being awarded" for gains the client may make in psychosocial functioning, etc.

The weighted closure approach to outcome measurement has advantages both for counselors and program administrators. One key merit for agency decisionmakers is that the method permits some influence over counselor motivation to serve certain kinds of clients, simply by varying the weighting factors. As the IRI study group (Bassett, 1974) concludes: "The weighted closure approach is considered by many to be the best available answer to the problem of service criteria, adequacy of counselor performance and of cost-benefit analysis" (p. 32).

However, a number of important caveats are also offered in the Bassett report. First, there have been numerous difficulties in experimental applications of weighted closure systems thus far.

*Case difficulty indexes will be considered here as a special case of weighted closure.

Many have fallen short of the desired improvements in outcome measurement predicted by their inventors, often resulting in findings no more precise or helpful than what was available previously through use of the old-fashioned Status 26 system. Secondly, most of the systems thus far devised are quite complex to use, and do not meet criteria of efficiency and minimum disturbance of the service delivery system, which ultimately are required if an outcome measurement system is to be successful.

A counselor's view:

An attractive system to counselors would need to be clear, concise, and not involve significantly more time to complete the administrative requirements. There should be no duplication of documentation, with one form serving as many purposes as possible. The system should not interfere with the provision of services. (No service should be held pending completion of additional administrative work.) It should reflect positive outcome benefits for counselors and motivate them to work with the more severely disabled. The benefit should be weighted in favor of counselor and client and not the bureaucracy. Finally, the system should be introduced gradually and not "dumped" on the counselors as a radical change in procedure. — Eric Lucero

There are several fundamental concepts inherent in most of the weighted closure systems to be described below:

- The idea of *rehabilitation gain* — that success in rehabilitation is not a dichotomous variable (e.g., placed on a job versus not placed), but rather a continuous variable along which client improvement falls depending on the *degree* of success of the rehabilitation process.
- The notion that improvement along this continuous variable takes place not only in vocational terms, but also in terms of economic independence, physical functioning, and psychosocial functioning.
- The notion that fair and effective measurement of outcome requires *weighting* the difficulty of given cases against some norm so that counselors are not unfairly penalized for taking the time and energy required to deal with the most difficult, hard-to-rehabilitate clients.

Following are some weighted closure systems now being developed or in experimental use.

- *Rehabilitation Difficulty Score* (Kunce et al., 1969) - An experimental, simplified weighting system intended as a screening device to single out the more difficult cases, this measure uses available data related to outcome with disadvantaged clients. At least according to information available for this review, its utility as a closure device has yet to be demonstrated. Kunce and Miller (1972) completed a study with a simplified version of this approach, using R-300 data which had a "common sense" relationship to employment.
- *Weighted Closures* (Berkowitz, 1972) - The purpose of this approach is to develop relative weights for significant client variables. In the work so far completed, validity and reliability are not well established because data from clients' records have often been missing for the cases processed.
- *Florida Difficulty Index* (Florida, Division of Vocational Rehabilitation, 1973) - This index has four basic elements: amount of time client was in rehabilitation service process (Statuses 10-26); average case service cost; average number of case services provided; and Sermon's Composite Case Difficulty Index. These factors for a given client are compared against annual averages and composite difficulty score computed. In experience with this scale, it has been found to agree closely with counselor estimates of case difficulty.
- *Oklahoma System Service Outcome Measurement Form* - The Oklahoma Department of Rehabilitative and Visual Services has been conducting a three-year study designed to measure case difficulty in client change. Five areas of client functioning are being considered: physical, educational, economic, vocational, and psychosocial. Pretesting and post-testing have proceeded with 4,400 clients in six States. Case difficulty is computed by relating eight demographic variables to successful closure. (Cited in Bassett, 1974. Presumably a report on this study should by now be available.)
- *Human Service Systems Scale* - Developed in Wisconsin, this device attempts to measure the degree of change experienced by clients served through various human

service agencies. It purports to measure five areas of human needs described by Maslow in his hierarchy of needs: physiological, safety and security, love and belongingness, self-esteem, and self-actualization. The instrument is machine scoreable. (Reagles and Butler, 1976.)

- *Virginia Rehabilitation Gain Schedule* — This instrument purports to measure work status, economic dependency, and psychological well-being of clients who have received VR services, with 18 objective, multiple-choice questions. The orientation is to the disadvantaged/disabled client, and the scale may have only limited application to the severely disabled and/or middle-class client. (Cited in Bassett, 1974.)
- *Goal Attainment Scaling* — Developed by the Program Evaluation Resource Center in Minneapolis, this technique is applicable to a wide variety of human service activities. It is a procedure for identifying behaviorally defined goals and outcomes for clients on a simple scale ranging from most unfavorable outcome to best-anticipated outcome. Each problem or goal area is identified by the counselor, often with input from the client, and weighted as to importance in the overall counseling process. Simple mathematical procedures are provided for weighting and for computing total outcome score.

Goodyear and Bitter (1974) report a study of the use of GAS at a rehabilitation hospital in Colorado. They concluded that GAS was a useful technique for measuring client change as a result of rehabilitation counseling services conducted in a rehabilitation setting. The Research Utilization Laboratory at the Jewish Vocational Service in Chicago has produced a manual (1976) for applying GAS in rehabilitation settings. It includes both step-by-step training in how GAS works and some concrete examples of how the approach can be applied with VR clients. Further information on GAS in VR settings (e.g., how it relates to the CARF standards) is given in the January 1977 issue of RUL's *Lab Notes*.

The RUL manual includes a most interesting rationale used to select GAS as the preferred approach for responding to some of the problems in outcome measurement we have noted in this paper. Management-by-Objectives approaches were rejected because no real structure for

measuring client progress was included. Some computerized systems for mapping progress and measuring cost-benefit were rejected because they seemed complicated, inflexible, and too costly. The RUL staff also felt that other available case difficulty weighting systems were not well-enough developed at this time to permit one of them to be selected. GAS was chosen for several reasons:

1. It can be used to measure a client's progress, a counselor's skill development, an agency's efficiency, or any number of things.
 2. Scales are completely individualized, to reflect *realistic* possibilities for each client or operation you want to measure, rather than predetermined requirements.
 3. GAS does not determine the methodology you use to reach the goals that are chosen.
 4. GAS can generate numerical progress scores if desired, but it can also be used more informally.
 5. GAS can be used as a communication tool with clients, between agencies, with clients' families, or within an agency.
 6. GAS does not have to be used with every client. It can be used with a random sample, with clients selected because they might benefit from its structure, with clients referred from a particular source, or those chosen by some other criteria.
 7. GAS has been thoroughly tested in the mental health field, and there have been extensive studies made of it by its originators.
 8. GAS is compatible with Management-by-Objectives, can be computerized if desirable, and fits into other systems easily. (pp. 1-2)
- *Miller and Barillas' Weighting System* (Miller and Barillas, 1967) — This approach weights closure on the basis of success ratios established for age, education, disability class, and type of previous service, based on the assumption that "because clients vary in their problem complexity, they also vary in the

proportions that achieve successful rehabilitation." In a test of this weighting system with a large group of clients, Wallis and Bozarth (1971) determined that the weighting system offered no better assessment than the present closure goal allowing one credit for each 26 closure, so the utility of this approach presently is in doubt.

- *Case Difficulty Index* (Sermon, 1972) — Sermon's Case Difficulty Index is based on data about what percentage of cases in different disability classifications do *not* get rehabilitated, statistically converted into a difficulty factor for each individual case closure. In assessing counselor performance, the Case Difficulty Index is used to develop two additional measures of counselor performance. The Total Weighted Closure Index is designed to measure total counselor effort represented by the number of successful closures obtained by the counselor. It is a "quantity tempered with difficulty" measure of counselor performance. The Average Weighted Closure Index measures the average difficulty of all cases successfully closed by a counselor regardless of the volume or actual number of cases closed. It is concerned not with measuring quantity of production but intended to provide a quality measure of counselor performance. The advantage of this index is that it is simple and adjustable to changing conditions. It currently is in use in New Jersey, Florida, and Minnesota.
- *Service Outcome Measurement Form* (Westerheide, Lenhart, and Miller, 1974) — This is a 16-scale measuring device for computing rehabilitation outcome in social, physical, emotional, and vocational terms, and to determine the relative difficulty of various cases.
- *Actuarial System for Weighting Case Closures* (Noble, 1973) — Noble's approach uses the Federal minimum wage as the standard against which to judge achievements by the State-Federal vocational rehabilitation program. A case is rated positively to the extent that it achieves or exceeds the standard. Conversely, a case receives negative weight to the degree that it fails to achieve the standard. The national experience of the VR program in facilitating employment for disabled clients is the actuarial basis for estimating the probabilities of success and failure.

- *Difficulty Index* (Silver, 1969) — This device relies on the counselor's estimated difficulty of rehabilitating persons with various disabilities in terms of time and effort. Paired comparison and semantic differentials techniques are used, but all judgments in Silver's study were made in reference to standard closure criteria.
- *Vocational Adequacy at Closure Measure* (Eber, 1966) — This measure involves differential weights for (1) work status at closure; (2) DOT job code at closure; (3) weekly earnings at closure; and (4) closure code. A related scale, *Vocational Adequacy at Follow-Up*, involves (1) employment at followup; (2) work status improvement from closure; (3) job satisfaction; and (4) counselor estimate of success.
- *Pattern-Probability Approach* (Bonge, 1975) — This approach involves computing a probability index of expected case difficulty based on predictions from biographical variables. The probability index can be used to weight case closure (*e.g.*, to give extra credit to counselors for success with cases the "statistics" say are especially challenging).

There are many interesting differences that exist among these various weighted case closure indexes. For example, some are based rather closely on traditional concepts of vocational outcome in rehabilitation, while others encompass nonvocational goals. Some are atheoretical, while one, the Human Service Scale, is based in part on the precept that a measure of outcome should *not* be a device developed for use in a related field or revised for use in rehabilitation, but that it *does* need to have an underlying theoretical rationale.

Westerheide, Lenhart, and Miller (1974) have developed a useful set of criteria which an administratively feasible measure of case difficulty and client change should meet:

1. Change should be measured for all clients regardless of closure status;
2. The measure should require no changes in the service delivery system;
3. The measure should not require sophisticated electronic data processing equipment;
4. The measure should be easily interpreted;

5. The measure should not require extensive inservice training;
6. The measure should not require more than ten minutes of the counselor's time per case;
7. The measure should yield reliable information when used across agencies, programs, and counselors; and
8. The content of the measure should reflect the real world concerns and goals of vocational rehabilitation.

These criteria can be well-used in evaluating the potential of any of the preceding outcome measures.

Westerheide and Lenhart (1972) also have defined rather clearly the kinds of basic questions that should be asked in a comprehensive, employability-based outcome measurement system:

"In the physical area, questions should be asked about the client's work tolerance, in terms of the time he could continue working, and type of work he could perform. Does the client have or can he develop skills which help compensate for his disability? Does he have secondary or multiple disabilities with which he must cope? What is the client's general health status other than the disability? Will the client miss work often?

"The client's educational background, learning ability and present skill level are important considerations . . . [as are] the relationship of the client's job skills to the current labor market, and the availability of training.

"The vocational and economic areas would address themselves to the client's work status, employment type, his dependence on others for financial support, source of support, weekly earnings or pressing financial problems that might lead the client to terminate services early.

"The psychological and social effects of the client's disability are the most difficult to measure, but information is needed in reference to prevocational skills and other social skills. How does the client identify with the worker's role? Will he be able to get along with co-workers and supervisors? Are his employment expectations realistic? Is the client able to make decisions

and implement plans for attaining future goals? Is his family supportive, or do they misunderstand his illness and present an obstacle to the client's rehabilitation?" (pp. 36-37)

Westerheide and Lenhart go on to suggest that an outcome measurement device administered to clients at the beginning of the rehabilitation process, again at the end, and perhaps at some later point in time for followup, and covering the above question areas, would be very useful.

An administrator's view:

The difficulties of implementing new systems are magnified as by electron microscopy when you have a dozen or two dozen district offices in a State trying to conform to a national norm. It is no wonder dinosaurs became extinct and the great advances in clinical practice tend to come from freestanding facilities rather than the large bureaucracies. — Carolyn Vash

Although some have been used with thousands of experimental cases, and others are in operational use in the field in limited areas, all of the above weighted closure methods are still in the developmental stage. In 1974, the Institute on Rehabilitation Issues Study Group on Outcome Measures decided that they could not endorse any of the then-available outcome measurement systems as replacements for the standard Status 26 system. This situation probably still holds true today, for none of these systems has yet been subjected to a widespread national test of validity, reliability, and cost-effectiveness. However, there are a number of promising methodologies described above which could be tested and developed through further work and applied as a means of improving the present outcome measurement system.

VI. RESEARCH AND RESEARCH GAPS

There are a number of R&D projects now underway designed to grapple with some of the problems as yet unsolved in the area of vocational rehabilitation outcome measurement. Many of these problems were brought to light in the preceding chapter, while discussing currently available alternatives to the standard Status 26 case closure system. It is evident from a review of these alternatives that all have significant shortcomings, some of them so significant as to make the alternative scarcely better than what it would be replacing.

Under such circumstances, it is hardly surprising that there has been reluctance on the part of decisionmakers at various levels to move in the direction of changing case closure systems. Following the discussion of potential new directions here, we will identify a number of gaps in the body of research knowledge to which studies and investigations yet to come will need to be addressed.

One of the most comprehensive efforts to develop criteria for measuring outcomes is the Rehabilitation Indicators Project, which is located at the New York University Medical Center, Institute of Rehabilitation Medicine; the project is directed by Drs. Leonard Diller, Wilbert Fordyce, and Durand Jacobs and coordinated by Margaret Brown.

The purpose of the project, which was first funded in October 1974, is to develop a generic language — called Rehabilitation Indicators or RI's — that can be used to describe a rehabilitation client's capacities, behaviors, and relevant social or physical environment. These indicators can be used to describe as broad or narrow a range of goals and subgoals as needed by varying clients at different kinds of rehabilitation centers.

The investigators assert that their RI's, when fully developed, will be useful not only in VR organizations, but also in related service delivery environments such as developmental disabilities and mental health. Through comparison of descriptions of actual behavior and goals, marked on the same indicator, the outcomes of rehabilitation can be described. Four types of rehabilitation indicators have been developed by the investigators:

Status RI's describe conditions such as "living arrangement," "employment status";

Activity pattern RI's describe recreational, self-care, educational, and other activities selected by the client in his day-to-day living;

Skill RI's describe behavioral "tools" that constitute client strengths and problems (e.g., "walking up/down stairs," "reading the newspaper"); and

Environmental RI's describe aspects of the physical, social, and personal environment that act as barriers or supports to clients in reaching their individual goals.

The investigators have conducted a number of meetings involving over 75 rehabilitation professionals and consumers from across the United States in gaining input to their own work to develop these Rehabilitation Indicators. Current project activities are focusing on field testing of the RI's, which will be studied in cross-sectional and longitudinal analyses in many types of rehabilitation agencies and facilities. The investigators believe that this type of testing in the field is necessary prior to broader dissemination of the RI's and standards for their use.

There are several unusual features of the RI's which mark this long-term research effort as potentially quite relevant to outcome measurement. One is that the descriptors Diller and his colleagues are developing are relatively value free. They describe behavior and environmental conditions, leaving judgments about good/bad, enough progress/not enough, and so forth to those who use the RI's. Secondly, this large-scale field research is likely to produce results much more strongly and broadly validated than is typical in this area. Third, RI's are being developed in nonvocational areas such as social and independent living skills.

At the West Virginia R&T Center — one of the RSA-funded research units which includes in its purview program evaluation and outcome measurement — Dr. Joseph Moriarty and his colleagues have been actively involved in aiding RSA in refocusing on measures of outcome in the use of RSA standards. The R&T Center has published a number of documents related to program evaluation, including reports interpreting the nine Federal evaluation standards for professionals in rehabilitation settings.

At the Arkansas R&T Center, there also is a programmatic interest in program evaluation and outcome measurement. For example, Dr. Stanford Rubin and his colleagues at the R&T Center received an RSA grant in 1974 to coordinate a program of activities for program evaluation under the Rehabilitation Act of 1973. Two national training conferences in program evaluation were held in 1974 and 1975, and ten regional program evaluation field studies also were conducted. The field studies, which were carried out in each HEW region, covered

such areas as client followup and client satisfaction with the written rehabilitation plan and other agency services. For example, Region V was responsible for a study of followup procedures designed to measure the *durability* of results from rehabilitation services — whether rehabilitated clients hold on to their jobs over time, whether they make satisfactory upward career progress, etc. A final report on the overall project and/or a summary report are available from the Clearinghouse of Rehabilitation Material at Oklahoma State University. Activities in the evaluation area continue at the Arkansas RTC, and a number of new project activities have been proposed for the Center's next year of funding.

In Minneapolis, Robert Walker of Evaluation Systems has developed a training program package, mentioned earlier in this report, for private rehabilitation facilities designed to help them cope with meeting the CARF Section Nine Program Evaluation Standards. The staff of a rehabilitation facility, once put through this program, can have significantly increased capacity to carry out their own evaluation activities. Defining overall mission, goals, objectives, and specific evaluation measures, and then placing these into a context of practically feasible assessment are among the activities involved in this procedure. Although not formal research in the traditional sense, Walker's work seems to represent an excellent practical application of knowledge about evaluation and outcome measurement. The *process* used, a "package" of staff training activities, could be adapted for purposes of implementing any outcome measurement system.

Dr. Frederick Collignon and his colleagues at Berkeley Planning Associates have researched outcome measurement — related to employment, homemaking, and nonemployment impacts — from an economic perspective through grants from RSA since 1971. Their work has produced a number of planning and evaluation tools, principally for use in programs rather than individual facilities.

An administrator's view:

Speaking only for myself, the top priority is to develop means of measuring the quality of certain outcomes, not just the frequency of one arbitrarily defined outcome. How good a job did the client get? Does it pay commensurate with his needs and estimated capabilities? Does it have opportunities for advancement? What is the client's net gain in income from the time of acceptance to the time of 26 closure? Did the client perchance lose income by relinquishing welfare and medical coverage although the agency scored a "26"? — Carolyn Vash

Research activities also are being conducted at the Rehabilitation R&T Center at the University of Wisconsin-Stout, and efforts related to outcome measurement are planned at the newly established RRRI at the University of Michigan, which has a primary responsibility in the program evaluation area.

Weighted closure methods have been talked about for a long time. One of the earlier cogent discussions is by Muthard (1965). Miller and Barillas (1967) were perhaps the first to develop and report a method for estimating case difficulty. Since then investigators such as those whose work is reviewed in Chapter V have continued efforts in this area. The approaches have ranged from simple case difficulty weighting to complex actuarial and probability theory applications. Currently field testing of some of these methods is going on, but no one has yet emerged with a clear enough record of validity and utility to permit its outright recommendation as a replacement for the current technology. Reviews of weighted closure methods, in addition to the one provided in the preceding chapter, have been given in Bassett (1974), Walls and Tseng (1976), and Bennett and Weisinger (1974).

Despite all of these research activities, a number of problems and gaps in research knowledge remain:

- Most developers of alternative systems of outcome measurement have made the basic assumption that *one* measurement system should be devised, and made flexible and general enough to accommodate the information needs of all those involved in the rehabilitation process. This assumption actually is a testable hypothesis, and it may be that the needs of today's complex rehabilitation service delivery service would be much better met if a *series* of parallel or tandem outcome measurement technologies were developed. For example, it may be more efficient for counselors to have one kind of outcome measurement data fed back to them, while program decisionmakers get another. At the very least, some experimental work with parallel systems for outcome measurement should be conducted.
- Bolton (1974) has questioned whether it is appropriate to aggregate outcome measures of vocational and non-vocational rehabilitation goals. It may be that a multidimensional model of measurement is appropriate here, and that there is some degree of independence between the variables that contribute to a client's success in getting a job and the variables that contribute to improved psychosocial functioning, or physical functioning. This again constitutes a

testable hypothesis, but one with very important implications for outcome measurement models that may be developed in the future.

- Regardless of what kind of outcome measurement system is developed, inevitably, when one moves beyond the simple matter of whether a client is employed or not 30 days after rehabilitation closure, one must consider *how* to get ratings of client success. Some relatively objective data are available (*e.g.*, earnings, number of hours worked per week, and so forth). However, estimates of psychosocial or physical functioning almost always require input of outsider judgment — counselor, employer, family member — or the client's own self-observation. Then the question of *rater bias* becomes highly relevant.

A client, or his/her counselor, can have a strong vested interest in presenting outcome data in a certain way (*e.g.*, a client who fears negative responses may affect his ability to reenter the system, or a counselor concerned about appearing to be a "poor performer"). Moreover, certain general biases tend to occur in such rating tasks (*e.g.*, the tendency to respond in what is felt to be a "socially desirable" way). The effects of such bias need to be carefully investigated in order to provide a better understanding of what outcome measurement data can be trusted, and to what extent. Moreover, there may be differences between self-report and actual behavior.

- There is a need to relate outcome measurement systems to the methods used in VR organizations to assess counselor performance. Too often, the latter are stated in vague, general terms or are related too much to administrative procedure and too little to the realities of serving clients.

A counselor's view:

In the area of research, I feel the greatest priority is the "weighted closure." If there is merit to allow two "points" for the rehabilitation of the severely disabled client, one point for the nonseverely disabled and one-half point for a client closed after the plan had been initiated, but who had received substantial vocational rehabilitation services, then the information should be thoroughly evaluated and pilot projects

implemented. At the present time, as stated earlier, the counselor's dilemma is the pressure for more "26" closures and also the mandate to work with the more severely disabled. However, we now know who is considered severely disabled and with those guidelines perhaps a system of weighted closures could be more easily developed.

The second area of research I feel should be evaluated concerns the delivery system. There have been many research projects to determine what relationship exists between personal factors and vocational rehabilitation outcome. Most studies center on the personal data of the client: age, disability, education, occupation, etc. The rehabilitation program itself is seen as a constant and, therefore, contributing little to explanation of rehabilitation outcome. The most important source of information for program improvement, the program itself, needs to be investigated. Study should or could address itself to service delivery components: what counselor or program activities enhance the client's chances for successful vocational rehabilitation outcome. — Eric Lucero

- The influences of both the rehabilitation system itself and the community environment in which a rehabilitation agency exists need to be considered in relation to outcome measurement data. "Community" includes both the work organization in which a handicapped person is placed, and the general community at large at both the client's place of residence and place of work.
- A particularly troublesome problem related to the research currently underway at New York University is that of criteria: what *is* a rehabilitation success? Where psychosocial factors are concerned, how should we be thinking of the client measures we take — in psychodynamic terms or in concepts more applicable to the specific situation of work?
- There is a need to devise ways of bringing *client input* into the process of setting and taking outcome measures, such as can be done with Goal Attainment Scaling. To some extent, the efficient operation of such an approach requires research investigation, in order to learn not only the best way for clients

to have input that will not disrupt the operation of the system, but also to understand how making this input can lead to clients' taking increased responsibility for setting and carrying out their own goals.

- Investigation also is needed into how outcome measurement in evaluation systems can be *speeded up* so as to provide quick feedback to all those who need outcome information.

An administrator's view:

What are the variables that really predict whether the client will "succeed" or "fail" (by some criterion) in a rehabilitation program? Since these are the variables which define the difficulty of the case, it seems important that we have definitive evidence on what they are. Right now, every effort I know of to develop a "weighted closure" system includes educational level, sex, and age as predictor variables, although most researchers have found that they account for only tiny portions of the variance. The variables which have shown impressively high correlations with success criteria have usually been in unreplicated studies. It is time to replicate some of these studies and establish a firm base of predictor variables. — Carolyn Vash

- Cost-benefits of outcome measurement systems need to be investigated carefully in order to learn which alternatives are most *economical* for use in different types of settings. This has to do, of course, with characteristics of the *agency* as much as those of the outcome measurement method.
- Efficient methods for *collecting followup data* still need to be developed. To date, followup research has concentrated on telephone surveys, mail surveys, and personal interviews. Each method has advantages and disadvantages, and research is needed both on how to increase the quality of followup data gathered by any of these three approaches, and on how to decide *which* method is most cost-effective for a given situation.*

*A manual on followup procedures currently is being prepared by ICD/RUL.

- The available knowledge base on what *client* characteristics (*e.g.*, relatively enduring psychological traits) bear on outcome needs to be more fully integrated into the procedures used to gather outcome data and the assumptions underlying them.
- Although it may be true that more complex measures of rehabilitation success are needed than are now available, there is also the possibility of what Joseph Kuncze has called "statistical overkill," which may lead to highly significant results using high-powered technical methods, but little generalizability to the widely varying circumstances of everyday practice. Therefore, researchers must think of measures which are *practical* in terms of rehabilitation agencies' capability to use them — and in terms of whether the inclusion of certain secondary factors substantially improves the validity of conclusions drawn about outcomes.
- Most studies to date, in developing weighted closure systems, have used the traditional criterion of employment to validate the new procedure. Some investigators (*e.g.*, Miller and Barillas, 1967; Sermon, 1972; Wallis and Bozarth, 1971) have attempted to operationalize case difficulty in terms of the probability of achieving a Status 26 closure with a given client. Weighted closure systems based in whole or in part on the concept are suspect, for they are utilizing a "shaky criterion" to begin with. It is difficult to know whether these "improved" systems are even touching on other relevant variables as defined in our expanded concept of rehabilitation success in Chapter III.
- Few studies have been conducted to develop measures of near-term outcomes; that is, client changes *during* the rehabilitation process.
- Outcome measures need to be couched in terms of what clients can do, and how clients and counselors can work together to produce these proficiencies, not in standard medical or psychiatric terms.
- There is always a question as to whether the outcomes measured with *any* measurement technology are indeed the result of rehabilitation services delivered. Spontaneous changes do occur in clients' lives, and they may be interfacing with other service resources. At the same time, there are ethical prohibitions to the use of control groups in true experiments that might otherwise be used to deal with this problem.

VII. IMPACT OF OUTCOME MEASUREMENT: COUNSELORS

In this brief chapter, we will discuss some of the ways in which any outcome measurement system has an impact on the work lives of counselors in a rehabilitation agency. This aspect of outcome measurement is frequently ignored in the design and implementation of such systems, yet the long-term prospects for success depend heavily on whether a method is perceived to have — and actually has — more positive than negative effects on counselors. Development of a system that is responsive to counselor needs and expectations in this way can proceed only through good understanding of *how* outcome measurement interfaces with the individual counselor.

A counselor's view:

Outcome measurement can work more for the counselor and the agency than against it. Although initially the anxieties listed in this chapter may be present with some individuals, I feel a good system of outcome measurement will be welcome. We cannot view 08, 28, and 30 closures as failures even though we consider the 26 closure as a success. The art of rehabilitation counseling should not be reduced to a win/lose situation for the counselor or the client. A good outcome measurement system should reflect those services provided to a client that increased his/her capacity to function in his/her education, and the quality of his/her life despite the fact that the client may have been closed, not rehabilitated, for a variety of reasons, many of which are neither the fault of the client or the counselor. At the present time credit for significant service to an individual is measured by the 26 closure. I do not feel that there should be an alternative to the 26 closure but rather a system that would in addition reflect the counselor effort and the significant services provided to those clients who were not closed 26.

— Eric Lucero

Although counselors, like other professionals in the human services, may be both threatened and turned off to some extent by outcome measurements, most can also perceive distinct advantages to having a system for providing good outcome data. On the one hand, counselors may be afraid to have their failures displayed to their colleagues and supervisors, particularly fearing punitive consequences if their "numbers"

don't come up to par. And, as mentioned earlier, most service delivery professionals follow to some extent the values of the medical model, in which there is an implicit assumption that dedicated professionals *will* and *do* provide helpful services and that, therefore, evaluation of outcome is to some extent simply a waste of time. On the other hand, particularly if the outcome measurement approach provides more information than just whether "the client got a job," a counselor may find what the system provides useful for working with clients, and for understanding what impact his/her efforts have on a client's progress through the rehabilitation system.

Vash (1977), in a recent unpublished paper on improving counselor performance, notes that as with most professional job roles, rehabilitation counselors can learn at least as much from their *errors* as they can from their successes. The more specific the feedback, the more learning can take place, and an outcome measurement system which is truly sensitive to the need is likely to be met with more enthusiastic acceptance by counselors.

Outcome measurement procedures have fairly predictable psychological consequences for the counselors living under it. A good system can provide counselors motivation to work harder and to benefit from the feedback provided in terms of learning new skills and improving the ones they already have. A bad system can generate fear, particularly with respect to performance appraisal by superiors or salary and promotional purposes. In some cases, the fear can become so great that a counselor may be hesitant to give information to his colleagues, because in an old-fashioned Status 26 system, letting a colleague know about, for example, a ready source of jobs for disabled clients may result in the colleague's flooding the organization with his clients, closing off this resource to the person who shared the information to begin with.

A counselor's view:

The psychological impact would, of course, vary from office to office. The fear used as an example is unknown to me or my peers in our office as free exchange of resources has always been a common practice. If the wrong approach were used to implement a new system of outcome measurement, perhaps the competition between counselors could effect changes in attitudes. However, we should not "live with" a situation if there is potential to change it. One way to alleviate the negative aspects of healthy competition is to instill a "team approach" attitude. If the counselor strongly identifies with the philosophy, goals, and problems within the district office, I feel personal anxiety would be minimized. Counselors as a group should be

more oriented to placement of the disabled, as a group, than interoffice competition. It would be the task of the immediate supervisor to instill this cohesiveness of total purpose. — Eric Lucero

Any outcome measurement system also has a *physical* impact on counselors. This refers to the time and paperwork involved in keeping records used to compile outcome measurement data.

Finally, it should be mentioned that outcome measurement systems inevitably have an impact on clients as well, at the level of direct work with rehabilitation counselors. The counseling relationship can be a very nourishing one for many disabled clients, and foreseeing the end of it can be quite threatening. However, building in the concept of movement into full independence from the counselor at the start of the service process, and including it in the individualized treatment plan, can help to defuse some of this client anxiety. Client disengagement is an important goal in itself.

VIII. IMPACT OF OUTCOME MEASUREMENT: ADMINISTRATORS AND POLICYMAKERS

Any outcome measurement system also has predictable consequences on VR agency administrators and policymakers in RSA and other national-level policy bodies. For administrators, one of the chief impacts concerns regular reports, already described in this paper, that must be made for funding and program review purposes. The nature of the outcome measurement system in use can have an important impact on what political advantage a State VR agency or private facility may enjoy with its funding sources, as well as providing information more or less usable for improving the system and its efficiency of operation. Outcome measurement also has, of course, a distinct impact on the overall program evaluation system of an agency and on its management information system, if there is one.

An administrator's view:

It's easy to get consensus on whether a client has a job. Professionals and lay people will readily agree, "That person has a job," or "That person doesn't have a job." But try to get two people, lay or professional, to agree on whether a particular person is a "difficult case" or not. What constitutes "difficult"? "So what if he's retarded. His father owns a construction company." There are so many kinds of variables involved, and no unequivocal evidence on which are most crucial to outcome. Then try to get them to agree on whether the casework was of good or poor quality. More variables to contend with. It's no wonder we always go back to "Does he have a job? Yes or no." — Carolyn Vash

At the policy level, outcome measurement data often can be used to make decisions about new programs, modifications or terminations of old ones, and about overall priorities for service delivery.

Knowing what happens to people who go through a rehabilitation system is most illuminating in deciding how that system ought to be run in the future. Therefore, policy decisions may be greatly influenced by the kind of outcome data that are made available.

IX. TAKING ACTION

A. INFORMATION RESOURCES

For those who wish to know more about outcome measurement systems in vocational rehabilitation in the United States, there are a number of resources that may be tapped. One of the most important is the Research Utilization Laboratory (RUL) at the ICD Rehabilitation and Research Center in New York City, which is an RSA-funded project specifically designed to operate an information retrieval and dissemination service in the program evaluation field. The RUL will answer information requests based both on staff knowledge and on a considerable library of materials in the rehabilitation evaluation field, many of which are quite relevant to concerns of outcome measurement.

The RUL serves in this information dissemination capacity in conjunction with several other RSA-funded efforts concerned with program evaluation. The Arkansas R&T Center has taken charge of evaluation in State agencies, and has as a specialty area outcome measures. The West Virginia R&T Center is principally concerned with self-evaluation tools for use in rehabilitation settings. The Regional Rehabilitation Research Institute at the University of Northern Colorado has done research regarding program objectives, outreach, service delivery components to vocational outcomes, etc., that would be relevant to outcome measurement. Finally, the newly funded University of Michigan RRRI will be concerned with program evaluation models, and also will have some responsibility for information dissemination. Contact can be made with any of these organizations for purposes of retrieving desired information related to outcome measurement.

Secondary resources are the indexes to RSA-sponsored R&D, which provide both basic citation data and brief abstracts for many hundreds of R&D projects completed under RSA funding over the past several years. Copies of these indexes are readily available in large university libraries, and also may be obtained by request to RSA.

More general organizational resources in the program evaluation field include the Evaluation Research Society and the Evaluation Network, two recently founded national professional organizations devoted to the subject of program evaluation in various organizational settings. Although the primary focus of these two organizations is *not* on outcome measurement in rehabilitation, the latter subject is of interest to a certain segment of the membership, and much of the materials and information these organizations may be involved in distributing would be relevant for adaptation to the concerns of those

measuring outcome in the rehabilitation field. The same may be true of other organizations in the program evaluation field, such as the Center for the Study of Evaluation in the School of Education, UCLA, or the Center for Social Policy Evaluation at the Graduate School of Education, Harvard University. Those specifically interested in Goal Attainment Scaling as an outcome measurement technique can contact the Program Evaluation Resource Center in Minneapolis, an organization founded by Dr. Thomas Kiresuk, GAS's coinventor.

A great variety of books, monographs, and journal articles related to outcome measurement already have been mentioned in this paper. Some key references which provide a general review of the outcome measurement field include: Chapter 4 in Bennett and Weisinger (1974), which is the most comprehensive compendium of program evaluation outcome measurement-related measures in existence; Bassett (1974), which is possibly the most up-to-date policy statement about outcome measurement in rehabilitation; *Recommended Standards for Closure of Cases* (Seventh Institute on Rehabilitation Services, 1969), a report from a study group on uniformity of standards in the determination of services to clients; Westerheide and Lenhart (1972); and Walls and Tseng (1976). The Westerheide and Lenhart review includes a particularly good synopsis of research on how *client* characteristics bear on outcomes.

Reviews in the related area of placement include Dunn et al. (1974), and Zadny and James (1976). The West Virginia R&T Center publishes a newsletter, *Rehabilitation Tomorrow*, which often contains material related to evaluation. Of even more significance is the *PA/VR Newsletter*, published by the ICD Research Utilization Laboratory. Each issue of this newsletter may contain helpful materials for those interested in either evaluation or outcome measurement.

Additional resources for obtaining information about outcome measurement systems and their development are one's colleagues, both in rehabilitation practice settings and in universities. Some of the researchers mentioned in these pages may be especially helpful in addressing issues related to outcome measures.

An administrator's view:

I can only speak for California, but there, I know, the VR agency's Research Utilization Specialist (RUS) can ferret out almost anything. I suspect other States which have established an RUS function would be equally enthusiastic about the help it offers.
— Carolyn Vash

B. KNOWLEDGE UTILIZATION/ORGANIZATIONAL CHANGE RESOURCES

For those policymakers and administrators ready to consider actively the problem of getting a new outcome measurement system developed and installed in rehabilitation — locally, Statewide, regionally, or nationally — there are resources available which speak generally to the issues involved in getting research findings or other new knowledge applied, and in making successful organizational changes. The most comprehensive reference work now in existence on knowledge utilization is *Putting Knowledge to Use: A Distillation of the Literature Regarding Knowledge Transfer and Change*, published by the Human Interaction Research Institute in 1976. A key reference on the utilization of evaluation findings is Davis and Salasin (1975), and an excellent synopsis of important principles of knowledge transfer is Glaser (1973).

C. WHAT THE COUNSELOR CAN DO

Innovative outcome measurement systems can be used by individual counselors even if not installed formally in the organization setting in which they work, as a means of increasing self-appraisal and spurring their own growth as professionals. Simple forms can be devised and used as recordkeeping systems for each counselor's work with his or her clients, and eventually the successful use of such systems on an individual level can lead to increased interest regarding their use in a group or agency.

Counselors can also take personal responsibility for stimulating a flow of information and active consideration of new systems for outcome measurement. If there are deficiencies in the present system, study them and gather evidence about the impact they are having on rehabilitation services. Then, these findings can be presented in staff meetings or professional association meetings as a way of stimulating possible change. The amount an individual counselor can do to promote system change may be very small, but opportunities *do* sometimes arise.

A counselor's view:

It is evident from the text that there is little the counselor or administrator can do to effect change in the system at the present time. Rehabilitation seems to be the most accountable of the human services programs. What we do, how we do it, when we do it, and the outcome of what we did is there for examination.

Counselors, administrators, and policymakers are aware of the problems in outcome measurement and have been for some time. Some of the studies cited, or resource information available, was developed ten years ago. As stated earlier in the text, DVR is still using basically the same outcome measurement system that was used fifty years ago because it works. Rehabilitation counseling service, delivery systems, and resources have changed. The knowledge explosion in medicine and counseling alone dictates major changes in working with clients. The instrument of change is the policymaker. When policy is set, the system follows the policy. — Eric Lucero

D. WHAT ADMINISTRATORS CAN DO

Administrators in State VR agencies and private settings can do much to implement revised and improved systems of outcome measurement, without necessarily waiting for changes in the national reporting system. These new systems can serve usefully for individual counselor self-improvement and performance appraisal, and also can provide useful information for overall program improvement.

It is important to remember in adopting any new system that field trial and limited experimentation are necessary before full implementation. Administrators should remind themselves not to leap into use of a new system just because it is "trendy." Also, outcome measurement systems will be much more effective and more efficiently used if there are also corresponding changes in the rewards system for counselors as the result of changes in the way success in rehabilitation is appraised.

E. WHAT POLICYMAKERS CAN DO

At the national level, there are a number of actions that could help to spur development of new and improved outcome measurement systems:

- Sponsor sessions and development of materials on outcome measurement, perhaps using as one model Robert Walker's material on program evaluation for rehabilitation facilities.
- Sponsor publications and newsletters in the outcome measurement field.

- Hold a national conference designed to clarify standards for measuring outcomes in rehabilitation. Include policymakers, researchers, administrators, counselors, and disabled persons in the roster for this conference.
- Encourage examination of, and possible adaptation of — at the *national* level — local or Statewide tested systems which seem to have worked.
- Sponsor the development of a national commission or task force on outcome measurement and reporting to determine what improvements ought to be made in outcome measurement systems at all levels, and then develop a plan to implement them.
- Develop and implement a system of outcome measurement as a pilot project in collaboration with selected graduate students and faculty in a rehabilitation counselor training program, to assist the State agency in assessing the value of the system before expansion on a regional or nationwide basis.
- Facilitate cross-talk with other human service agencies in regard to outcome measurement issues. For example, Goal Attainment Scaling, one of the most promising innovations in outcome measurement discussed in this report, was originally developed under funding support from the National Institute of Mental Health. There are very likely other assessment devices from areas such as mental health which could be adapted for use in rehabilitation, or at least used as a source of ideas. Instrumentation developed for use in manpower service programs with disadvantaged clients by the Employment and Training Administration, U. S. Department of Labor, would be another particularly likely source.

Some issues and areas of needed investigation which could be followed through in future research studies were presented earlier in this paper. Although it is beyond the scope of this report to specify in any detail what research should be done and in what sequence, it does seem appropriate to remind the reader at this point that proposed new research must be *coordinated* with past and ongoing efforts, and must be adequately funded. Projects such as the New York University effort to develop Rehabilitation Indicators — a multiphase, national-scope undertaking — are probably what is most needed at this point in time. Developing new standards and techniques regarding outcome measurement

which can be applied at the national level simply can't be done on a shoestring: the complexities are too great. It takes projects which have the necessary "luxuries" of large staffs, ample startup time for conceptualization, and resources for wide consumer involvement and field testing to create new methods that are credible and will, in fact, have good potential for use.

Policymakers must therefore be prepared to commit sufficient levels of funds to sponsor these more complex R&D projects. Also, RSA at the Federal level probably would need to serve in an overall coordinating role to minimize possible overlap and duplication if several such efforts were funded. The suggested national commission on outcome measurement, above, might be employed as a policy guidance body to advise RSA on such matters.

Finally, policymakers need to give attention to what sorts of changes in the basic VR legislation may be necessary in order to fully accommodate improved methods of outcome measurement. The present law seems to reinforce the traditional concepts (*e.g.*, Status 26, etc.) rather strongly, and unless according modifications in the law are made, it is unlikely that any new system will have a substantial impact. State VR agencies and private facilities will continue — in their own self-interest and in order to have funds with which to serve their clients — to follow the broad guidelines of recordkeeping and reporting suggested in the basic legislation and the administrative regulations surrounding it. When changes in the "rules of the game" are made, changes in agency and facility behavior can more reasonably be expected to occur.

X. THE FUTURE

The consensus of opinion seems to be that modifications in rehabilitation outcome measurement systems *will* eventually be made, but the changes will be relatively small at first, and made slowly. New legislation does make some change imperative, however, because there are new requirements for all VR organizations to meet in the program evaluation area. Research now is underway, such as that by Leonard Miller and his associates at New York University, that should help significantly in addressing the making of these changes. Reward systems for counselors, and for agencies as a whole, also will have to change in order for outcome measurement systems to take proper root.

To some extent, making innovations in outcome measurement traditionally has been seen as the province of academic researchers. Until recently, most new outcome assessment approaches were developed without much creative involvement by their potential users in the field, and often without much in the way of field testing.

An important *attitude change* that may help to increase the impact of future work in this area is for counselors, administrators, and policymakers — and researchers! — to start regarding making improvements in outcome measurement technology as *everybody's* business. This is beginning to happen now, in the work of State VR agencies that have experimented with innovative outcome measurement techniques, and in the heavy involvement of consumers — counselors, administrators, the disabled themselves — in giving advice and creative input to research projects such as the Rehabilitation Indicators effort at New York University.

One way to solidify such an attitude change, and in fact to provide a mechanism for carrying out most of the suggestions made in the preceding chapter, would be *for RSA to sponsor the creation of an independent Center on Rehabilitation Outcome Measurement*. This center might be modeled after current plans for a National Rehabilitation Information Center, which is designed to coordinate information dissemination and research utilization activities in rehabilitation.

This center could develop, either using inhouse staff or outside subcontractors, outcome measurement materials, publications, and newsletters. It could sponsor a national conference on outcome measurement, and set up pilot projects for testing of innovative approaches. Its advisory body could be the previously suggested national commission on outcome measurement, which might include in its membership rehabilitation administrators, from both State VR agencies and private facilities, RSA representatives, VR counselors, and disabled consumers of VR services.

Representation also could be provided from groups such as CSAVR, NRA, ARA, NRCA, and consumer advocacy organizations. Such a center could well provide the coordinated national-scope effort which now seems so much needed to bring to a "critical mass" progress which is being made in the outcome measurement field.

This paper has described a currently existing body of resources — research products, research underway, etc. — which is both a source of excitement and frustration. There seem to be many good new ideas which could be put to work, and yet the current evidence suggests that no one system for improving outcome measurement has yet been developed to the extent where it could be recommended for national implementation. Our two commentators — Eric Lucero and Carolyn Vash — have throughout this paper expressed what is probably a very common frustration of both counselor and administrator: "We need change, but it *always* seems to be just around the corner!"

Many of the outcome measurement devices reported in Chapter V do indeed have potential, but are still substantially short of what is required for widespread use. The specific suggestions made in the preceding chapter, and the more encompassing one given here to create a National Center on Rehabilitation Outcome Measurement, could help to generate the above-mentioned "critical mass" for change — research evidence, revised legislation, new products, and changes in attitudes among all those involved in the rehabilitation service delivery system.

Perhaps of critical importance is the fact that such a center would provide a *focus* for many diverse efforts and create a sense of visibility and purpose that would in itself increase the motivation for change. The well-entrenched outcome measurement system may not readily change under an impetus of any lesser intensity.

Pressures for evaluation and accountability, and for increasing services to the severely disabled, are likely to increase from the Federal level. These pressures will serve as the key motivators for promoting faster changes in outcome measurement systems over the next few years. As new systems and resources develop, further changes will be easier to make. Ultimately, as Brian Bolton has pointed out, outcome measurement needs to be excellent because *prediction* of what will happen to a given client is at the heart of the rehabilitation process. Only by gathering good information about how clients have fared in the past can we build a knowledge base for the future.

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- Bennett, Eleanor C. and Weisinger, Marvin. *Program Evaluation: A Resource Handbook for Vocational Rehabilitation*. New York: ICD Rehabilitation and Research Center, 1974.

"This handbook on program evaluation is a compilation of approaches, methods, and techniques culled from over 250 sources. It is an attempt to bring together a large array of information and organize it into a unified conceptual framework" (Preface). An extensive bibliography and reading list is included.

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A comprehensive review of the literature and the issues surrounding RSA's nine standards for program evaluation. The paper includes a discussion of individual State agencies' experience with the VR performance standards, and an analysis of what further refinements may be needed for the future.

- Berkowitz, M. *Weighted Closures*. New Brunswick, N. J.: Bureau of Economic Research, Rutgers University, 1972.

The development and use of an approach to weighting case closures in rehabilitation agencies is described.

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Seventeen chapters in this edited volume were prepared by experts in psychometrics, clinical assessment, and counselor education, each designed to cover a different aspect of psychological measurement as applied in the evaluation of disabled clients. There is a chapter on outcome measurement and one on assessment of counselor performance.

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This textbook offers an introduction to research methods in rehabilitation for counselors and counselor trainees. One chapter is devoted to a review of basic issues relevant to the assessment of rehabilitation outcomes.

Bonge, D. *A Pattern-Probability Approach to Predicting Client Outcome*. Research Report ARRTC No. 923. Fayetteville, Arkansas: Arkansas Rehabilitation Research and Training Center, University of Arkansas/Arkansas Rehabilitation Services, December 1975.

Using standard data routinely collected by rehabilitation agencies (R-300 form), this study developed and tested a weighted closure system based on Bayes' Theorem. The technique, according to the author, allows prediction of outcome on any variable for which records are available at closure. Practical uses of the system are discussed in the paper.

Cooper, Paul G. and Rubin, Stanford E. *An Index of Suitability of Placement: A Practical Measure for Comparing the Effectiveness of Rehabilitation Service Units*. Research Report ARRTC No. 293. Fayetteville, Arkansas: Arkansas Rehabilitation Research and Training Center, University of Arkansas/Arkansas Rehabilitation Services, November 1975. 17 pp.

This paper presents a modification of the original Region IX index, which compares the earnings of rehabilitated clients with those of people in the general population having the same demographic characteristics, and demonstrates the use of this modified index within a State agency. The new index, the Cooper-Rubin Index, is a technique for weighting earnings at closure. As its primary use is administrative and/or evaluative, this index provides a tool for comparative assessment of management or administrative units with respect to one dimension of their placement effectiveness.

Davis, H. R. and Salasin, S. E. "The Utilization of Evaluation." In: Struening, Elmer L. and Guttentag, Marcia (eds.), *Handbook of Evaluation Research*. Beverly Hills, California: Sage Publications, 1975.

One of the first published discussions of the problems involved in getting evaluation findings put to use in service delivery settings, and possible strategies for overcoming these difficulties. The paper emphasizes the A VICTORY approach to predicting readiness for change and planning for implementation. A VICTORY is an acronym for eight factors presumed relevant to readiness and implementation planning; the factors center on individual and group psychological barriers to effective change in organizations. The article provides an extensive analysis of how these apply in the area of program evaluation.

Dunn, Dennis J., et al. *Placement Services in the Vocational Rehabilitation Program*. Menomonie, Wisconsin: Research and Training Center, Stout Vocational Rehabilitation Institute, University of Wisconsin-Stout, December 1974.

The goals and objectives of placement services, current practices and techniques with different target groups, methods for determining the effectiveness of placement services, and implications for programs, policy, and research are discussed in this paper. Selected literature on placement services is reviewed.

Eber, H. W. "Multivariate Analysis of a Vocational Rehabilitation System." *Multi Behavioral Research Monograph* 66-1, 1966.

This paper discusses two criterion measures derived from closure and followup information for use in assessing outcomes at the vocational level. The two measures are named "Vocational Adequacy at Closure" and "Vocational Adequacy at Follow-up."

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This weighted closure index measures outcome as reflected by four factors — amount of *time* the client spent in the rehabilitation process, amount of *money* spent on the rehabilitation, number of services provided, and the computed *Sermon Difficulty Index*.

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A handbook describing the development, administration, and use of the *Minnesota Satisfactoriness Scale*, a device which measures an employer's satisfaction with the performance of a worker provided through a rehabilitation agency.

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This paper reviews some of the major concepts relevant to facilitating the effective application of new knowledge (especially that stemming from R&D) in practitioner settings. Psychological barriers to change and strategies for overcoming them are emphasized.

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Hefferin, Elizabeth A. and Katz, Alfred H. "Issues and Orientations in the Evaluation of Rehabilitation Programs: A Review Article, Part I," *Rehabilitation Literature* 32(3), March 1971: 66-74, 95.

An overview of the major problems inherent in developing criteria for evaluating the effectiveness of rehabilitation treatment is presented. An extensive bibliography is provided.

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The Objectives-Priorities System (OPS), a modified version of Management by Objectives (MBO), is described, and the implications of this program evaluation system for human service agencies are discussed.

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This report of a vocational rehabilitation program in the Pruitt-Igoe high-rise housing project in St. Louis discusses the different relationships of two outcome criteria - job placement and job level - to other variables, and describes the development of a simple and easily scored 10-point rehabilitation index.

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"The validity generalization of a simplified prediction method was investigated in this study. The relationships of index scores, determined from a conglomerate of 12 personal characteristics to 3 outcome criteria were tested on a sample of 6,099 clients who were provided rehabilitation services by one state agency Results demonstrated significant relationships between index scores and the criteria of subsequent occupational adjustment in both agencies" (authors' abstract)

Miller, Leonard A. and Barillas, Mario G. "Using Weighted 26-Closures as a More Adequate Measure of Counselor and Agency Effort in Rehabilitation," *Rehabilitation Counseling Bulletin* XI, December 1967: 117-121.

The results of an exploratory study to construct an empirical measure of problem complexity for clients is reported. The relationship between one such measure and other criteria of counselor performance is also examined in an exploratory way.

Moriarity, Joseph B. "Issues in Evaluating Vocational Rehabilitation." *Professional Psychology* 8(4), November 1977.

The author discusses reasons why the State-Federal VR system has traditionally enjoyed such broad-based political support, and the impact of this support — both positive and negative — on efforts to evaluate rehabilitation service programs. Outcome measurement methodology is emphasized.

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"This report summarizes the work of a national committee of the Institute on Rehabilitation Services. Past research, committee studies, and the exemplary practices of various state VR agencies in caseload management are described in summary fashion. Recommendations are made for improving caseload management practices." (Author's summary)

Muthard, John E. and Miller, Leonard A. *The Criteria Problem in Rehabilitation Counseling*. Iowa City: College of Education, University of Iowa, 1966.

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A closure weighting system based on salary upon (or after) closure is presented. The system gives credit for closures which equal or exceed the Federal minimum wage, subtracts credit for closures falling below the minimum wage, and classifies as "unsuccessfully served" all cases failing to achieve an employment outcome or its equivalent. The advantages of the system are discussed.

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The development of a measurement device which utilizes rehabilitation concepts is described. The Human Service Scale has potential for use by counselors, clients, supervisors, administrators, program evaluators, researchers, and funding agencies.

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This research report describes the development of a measure of VR service effectiveness. The *Scale of Rehabilitation Gain* focuses on the client's physical and emotional health, work adjustment, and life activities.

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This manual discusses Goal Attainment Scaling as an evaluation tool in rehabilitation and serves as an instructional tool to train rehabilitation personnel to construct scales and use them.

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Rubin, Stanford E. (ed.). *Studies on the Evaluation of State Vocational Rehabilitation Agency Programs*. Fayetteville, Arkansas: Arkansas Rehabilitation Research and Training Center, University of Arkansas/Arkansas Rehabilitation Services, 1975.

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"In this chapter the rehabilitation process is conceptualized as an input-intervention-output system. The client's progress through the agency system is outlined and the various decision and termination points are noted. A comprehensive review of the criterion problem in rehabilitation includes a review of agency outcome criteria which generate success/failure ratios and other outcome variables including weighted closure systems and non-vocational criteria." (Arkansas Rehabilitation Research and Training Center, *Research Abstract* 3(9), September 1975)

Weisinger, Marvin. "Overview of Outcome Measures." In: Robinault, I. and Weisinger, M. (eds.), *Program Planning and Evaluation for Vocational Rehabilitation*. New York: ICD Rehabilitation and Research Center, September 1975: 50-67.

This review chapter summarizes the current practices regarding outcome measurement in State VR agencies, as coordinated by RSA at the Federal level. Then, a number of alternatives to existing practice are cataloged - measures of program throughput, measures of economic/vocational factors, measures of client-related factors, and weighted closure and case difficulty measures.

Weisinger, Marvin, Robinault, Isabel P., and Bennett, Eleanor C. (eds.). *Program Evaluation: Selected Readings*. New York: ICD Rehabilitation and Research Center, 1975.

A collection of papers reprinted from other sources covering major topic areas in VR program evaluation. Several important discussions of outcome measurement are included.

Weiss, D. *Manual for the Minnesota Satisfaction Scale*. Minnesota Studies in Vocational Rehabilitation XXII, Bulletin 45. Minneapolis, Minnesota: University of Minnesota, 1967.

A handbook describing the development, administration, and use of the *Minnesota Satisfaction Scale*, a device which measures client satisfaction with employment obtained through a rehabilitation agency.

Westerheide, William J. and Lenhart, Lowell. *Case Difficulty and Client Change: A Review of the Literature*. Monograph 1. Oklahoma City: Department of Institutions, Social and Rehabilitation Services, 1972. 44 pp. (ERIC Report ED 099 719.)

Available information pertaining to case difficulty and change in vocational rehabilitation clients in physical, educational, psychosocial, economic, and vocational areas is analyzed. Three variables - client characteristics as they pertain to rehabilitation success, case difficulty, and client change - which must be considered in adopting an evaluation method are discussed.

Westerheide, William J., Lenhart, Lowell, and Miller, Clinton M., III. "Case Difficulty: Summary." In: Weisinger, Marvin, Robinault, Isabel P., and Bennett, Eleanor C. (eds.), *Program Evaluation: Selected Readings*. New York: ICD Rehabilitation and Research Center, 1975.

This article summarizes development and testing of a new outcome-measurement instrument, the Service Outcome Measurement Form. The Form "demonstrated good reliability, solid internal structure, and a substantial and stable relationship to counselor ratings of Global Case Difficulty, Time and Effort, and the Severity of Client's Handicap, while at the same time, staying within the confines of administrative necessity."

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Zadny, Jerry J. and James, Leslie F. *Another View on Placement: State of the Art 1976*. Studies in Placement Monograph No. 1. Regional Rehabilitation Research Institute. Portland: School of Social Work, Portland State University. March 1976.

This literature review of job placement for the disabled analyzes placement strategies and practical questions suggested by the literature. Future research areas are also recommended.